



United States
Department of
Agriculture

Grain Inspection,
Packers and
Stockyards
Administration

Federal Grain
Inspection
Service

April 1999

Bean Inspection Handbook

U.S. DEPARTMENT OF AGRICULTURE
Grain Inspection, Packers and Stockyards
Administration
Federal Grain Inspection Service

BEAN INSPECTION HANDBOOK
Table of Contents
4/01/99

TABLE OF CONTENTS

FOREWORD

CHAPTER 1

GENERAL INFORMATION

CHAPTER 2

SAMPLING

CHAPTER 3

INSPECTION

CHAPTER 4

CERTIFICATION

United States Department of Agriculture
Grain Inspection, Packers and Stockyards Administration
Federal Grain Inspection Service

FGIS Program Handbook

FOREWORD

The Bean Inspection Handbook sets forth the policies and procedures for sampling, inspecting, and certifying dry beans in accordance with the regulations under the Agricultural Marketing Act of 1946. These regulations establish the basic guidelines for inspecting beans and authorize the issuance of such additional guidelines as may be necessary for the interpretation and application of the United States Standards for Beans. Direct quotations from the United States Standards for Beans are shown in this handbook in italics.

The information contained in this handbook is applicable to official bean inspection services performed by the Federal Grain Inspection Service (FGIS), a program under the Grain Inspection, Packers and Stockyards Administration (GIPSA), and designated State cooperators. Persons interested in obtaining official services may call or write any FGIS field office or cooperator.

Trade names are used solely to provide specific information. The mention of trade names does not constitute a guarantee or warranty of the product by the U.S. Department of Agriculture or an endorsement by the Department over other products not mentioned.

David Orr, Director
Field Management Division

CHAPTER 1

GENERAL INFORMATION

1.1	INTRODUCTION	1-1
1.2	DEFINITIONS	1-1
1.3	ABBREVIATIONS	1-3
1.4	ORIGINAL INSPECTION SERVICES	1-4
1.5	RETEST INSPECTION SERVICES	1-4
1.6	APPEAL INSPECTION SERVICES	1-7
1.7	BOARD APPEAL INSPECTION SERVICES	1-10
1.8	NEW ORIGINAL INSPECTIONS	1-11
1.9	REGISTERED TYPE SAMPLE INSPECTIONS	1-11
1.10	ORIGIN INSPECTIONS	1-13
1.11	COMBINED-LOT INSPECTIONS	1-14
1.12	OTHERWISE GRADE INSPECTIONS	1-17
1.13	FACTOR ONLY INSPECTIONS	1-18

Attachment 1 - Reference Publications

Attachment 2 - Form FGIS-955, "Application for Inspection under the
Agricultural Marketing Act"

1.1 INTRODUCTION

The inspection of beans is a service provided under the Agricultural Marketing Act of 1946 (Act). This service is provided, upon request, by either a Federal Grain Inspection Service (FGIS) designated cooperator (e.g., the State of California) or an FGIS field office, depending upon the location of the lot and the type of inspection requested. Official inspection of beans is performed by trained and licensed (or authorized) official personnel employed by FGIS or a cooperator.

1.2 DEFINITIONS

Appeal inspection. A review inspection, by FGIS, of the results of an original or retest inspection service.

Board appeal inspection. A review inspection, by the FGIS Board of Appeals and Review (BAR), of the results of an original inspection or appeal inspection service for grade or grading factors.

Carrier. A truck, trailer, truck/trailer combination, railcar, barge, ship, or other container used to transport bulk, sacked, or packaged beans.

Certification. The process of issuing an official certificate that indicates the quality of a lot or sample of beans or the results of some other official service.

Checkcounting. The process of determining the total number of filled outer containers in a lot in order to determine that the number of containers shown by the applicant is correct and certifying the results.

Checkloading. The process of performing a stowage examination on a carrier, computing the number of filled containers loaded aboard, observing the condition of the containers being loaded aboard, sealing the carrier if practicable, and certifying the results.

Checkweighing. The process of weighing a selected number of containers from a lot, determining the estimated total gross, tare, and net weight, or the estimated average gross or net weight per filled container, and certifying the results.

Composite sample. A single sample composed of small portions (component samples) taken throughout a lot.

Condition inspection. The process of determining whether an identifiable lot is water damaged, fire damaged, or has rodent or bird contamination, insect infestation, or any other deteriorating condition, and certifying the results.

Cooperator. An agency or department of the Federal Government which has an interagency agreement with FGIS or state agency which has a reimbursable agreement with FGIS.

Lot. Any identified amount of beans offered by an applicant for inspection.

Lot (quality) inspection. The process of obtaining a representative sample(s) of an identifiable lot, examining or testing the sample(s), examining relevant records of the lot, and certifying the results.

Observation of loading. The process of determining that an identified lot has been moved from a warehouse or carrier and loaded into another warehouse or carrier and certifying the results.

Official personnel. Any authorized Department employee or person licensed by FGIS to perform all or specified functions under the Act.

Official sample. A representative sample drawn by official personnel licensed or authorized by FGIS.

Original inspection. An initial inspection of a lot or sample.

Retest inspection. A review inspection, using the same laboratory procedures, of an original inspection for a nongrade (chemically-tested) factor(s); e.g., aflatoxin.

Sampling. The process of drawing a representative sample from a lot of beans.

Stowage examination. The process of visually determining if an identified carrier or container is clean, dry, free of live infestation, rodents, toxic substances, and foreign odor; suitable to store or carry beans; and certifying the results.

Submitted sample inspection. The process of grading or testing a sample submitted by an applicant and certifying the results.

1.3 ABBREVIATIONS

The following abbreviations may be shown on work records:

AVG	Average	KG	Kilogram(s)
BD	Badly damaged	LB	Pound(s)
BK	Broken kernels	LW	Live weevils
BL	Bleached	M	Moisture
BWB	Blistered, wrinkled, and broken	ML	Milliliter(s)
C	Color	MM	Millimeter(s)
CC	Checkcounting	MOTH	Angoumois moth
CCL	Contrasting class	MUST	Musty
CE	Condition examination	NWS	Not well screened
CHP	Choice Handpicked	NS	Not standardized
CL	Class	O	Odor
CLO	Checkloading	OBL	Observing loading
CM	Centimeter(s)	OBF	Observing of fumigation
COFO	Commercially objectionable foreign odor	OCL	Other classes
CR	Cracked seedcoats	ODI	Other dead insects
CT	Count	OLI	Other live insects
CTB	Classes that blend	OG	Other grains
CW	Checkweighing	PHP	Prime Handpicked
DG	Dark grey	S	Sieve
DHT	Damaged by heat	SG	Sample grade
DK	Damaged kernels	SCR	Screenings
DKG	Dockage	SMUT	Smutty
DLQ	Distinctly low quality	SOUR	Sour
DW	Dead weevils	SPL	Splits
FE	Facility examination	SR	See reverse
FM	Foreign material	STON	Stones
FSUB	Unknown foreign substance	STOW	Stowage examination
FT	Foot (feet)	TW	Test weight
G	Gram(s)	VAR	Variety
HP	Handpicked	WVLY	Weevily
HT	Heat-damaged	WVDK	Weevil damaged kernels
HTG	Heating	X	Mixed
INR	Insect refuse	U.S.	United States
INW	Insect webbing	SUBSTD	U.S. Substandard
		SG	U.S. Sample Grade

1.4 ORIGINAL INSPECTION SERVICES

- a. Any interested person may request an original inspection.
- b. Requests may be made verbally or in writing.
 - (1) Verbal requests shall be confirmed, in writing, upon request. All written requests shall be made in English and include the following:
 - (a) The identification, quantity, and location of the beans;
 - (b) The type of service(s) requested;
 - (c) The names and mailing addresses of interested persons; and
 - (d) Any other relevant information that official personnel require.
 - (2) Copies of request forms may be obtained from any cooperator or FGIS field office. If all required documentation is not available when the request is made, it shall be provided as soon as it is available. At their discretion, official personnel may withhold inspection service pending receipt of the required documentation.
- c. Requests for services, other than submitted sample inspections, must be made with the cooperator or FGIS field office responsible for the area in which the service will be provided.
- d. Requests for submitted sample inspections may be made with any cooperator or FGIS field office that provides original bean inspection services.
- e. Requests for services to be performed during loading, unloading, handling, or processing, must be submitted far enough in advance so official personnel can be present.

1.5 RETEST INSPECTION SERVICES

- a. Any interested person may request a retest inspection service on chemically-tested (nongrade) factors; e.g., aflatoxin. When more than one interested person requests a retest inspection, the first interested person to file is the applicant of record.
- b. Requests may be made verbally or in writing.

- (1) Verbal requests shall be confirmed, in writing, upon request. All written requests shall be made in English and include the following:
 - (a) The identification, quantity, and location of the lot;
 - (b) The type of service(s) requested;
 - (c) The names and mailing addresses of interested persons; and
 - (d) Any other relevant information that official personnel require.
 - (2) Requests must be filed with the FGIS field office responsible for the area in which the original inspection was performed.
 - (3) Copies of request forms may be obtained from the cooperator or FGIS field office. If all required documentation is not available when the request is made, it shall be provided as soon as it is available. At their discretion, official personnel may withhold inspection service pending receipt of the required documentation.
- c. A retest inspection shall only be performed by an authorized person. Official personnel shall not perform, participate in performing, or issue a certificate if they participated in a previous inspection or certification of the lot unless there is only one authorized person available at the time and place of the requested retest inspection.
 - d. Only one retest inspection may be obtained from any original inspection.
 - e. The scope of a retest inspection shall be limited to the scope of the original inspection. If the request specifies a different scope, dismiss the request.
 - f. A retest inspection shall be limited to an analysis of the file sample.
 - g. A retest inspection certificate supersedes the original inspection certificate. The superseded certificate will be considered null and void as of the date of the retest inspection certificate. The original inspection certificate for the inspection being retested must be promptly surrendered.

- h. A retest inspection certificate shall be issued before the close of business on the business day following the date the retest inspection is completed.
 - (1) Each retest inspection certificate shall clearly show the word “Retest” and the following statement: “This certificate supersedes Certificate No. _____, dated _____.”
 - (2) When the results for more than one kind of service are reported on the original certificate and not all the services are retested, use the following statement: “(Type of service) results based on retest inspection; all other results are those of the original inspection service.”
 - (3) The certificate shall show the following statement: “Results based on file sample.”
 - (4) If the superseded original certificate is in the custody of FGIS, the superseded certificate shall be marked “VOID.” If the superseded certificate is not in the custody of FGIS at the time the retest certificate is issued, the following statement shall be shown on the retest certificate: “The superseded certificate identified herein has not been surrendered.”
- i. A request for a retest inspection shall be dismissed when:
 - (1) The scope is different from the scope of the original inspection;
 - (2) The condition of the beans have undergone a material change;
 - (3) A representative file sample is not available;
 - (4) The applicant requests a new sample; or
 - (5) The reasons for the retest are frivolous.
- j. Official personnel shall notify the applicant of the proposed dismissal of service. The applicant shall then be afforded reasonable time to take corrective action or to demonstrate there is no basis for the dismissal. If the corrective action has not been adequate, the applicant shall be notified of the decision to dismiss the request for service; and any results of service shall not be released.
- k. An applicant may withdraw a request for retest inspection any time before official personnel release results, either verbally or in writing.

NOTE: **Applicants who withdraw a request for service may be billed for all expenses incurred prior to withdrawal.**

1.6 APPEAL INSPECTION SERVICES

- a. Any interested person may request an appeal inspection. When more than one interested person requests an appeal inspection, the first interested person to make the appeal request is the applicant of record.
- b. Requests may be made verbally or in writing.
 - (1) Verbal requests shall be confirmed, in writing, upon request. All written requests shall be made in English and include the following:
 - (a) The identification, quantity, and location of the beans;
 - (b) The type of service(s) requested;
 - (c) The names and mailing addresses of interested persons; and
 - (d) Any other relevant information that official personnel require.
 - (2) Requests for appeal inspection services on quality (grade) factors must be filed with the FGIS field office responsible for the area in which the original inspection was performed or with the BAR. Requests for appeal inspection services on chemically-tested (nongrade) factors must be filed with the FGIS Commodity Testing Laboratory.
 - (3) Copies of request forms may be obtained from any cooperator or FGIS field office. If all required documentation is not available when the request is made, it shall be provided as soon as it is available. At their discretion, official personnel may withhold inspection service pending receipt of the required documentation.
- c. An appeal inspection shall only be performed by an FGIS inspector.

- d. Official personnel shall not perform, participate in performing, or issue a certificate, if they participated in a previous inspection or certification of the lot unless there is only one authorized person available at the time and place of the requested appeal inspection.
 - e. Only one appeal inspection may be obtained from any original or retest inspection service.
 - f. The scope of an appeal inspection shall be limited to the scope of the original inspection. If the request specifies a different scope, the request shall be dismissed. When chemically-tested factors are appealed, all chemically-tested factors must be tested and certified.
 - g. The applicant may request that an appeal inspection be based on a file sample or a new sample. However, an appeal inspection shall be based on a new sample only if the lot can positively be identified by official personnel as the one that was previously inspected and the entire lot is available and accessible for sampling and inspection.
 - h. An appeal inspection shall be limited to a review of the sampling procedures and an analysis of the file sample when, as a result of the original inspection, the beans are found to be contaminated with filth or to contain a deleterious substance, including insect webbing and filth. (Clean-cut weevil-bored beans are not considered a deleterious substance.) If it is determined that the sampling procedures were improper, a new sample will be obtained if the lot can be positively identified as the lot which was previously inspected and the entire lot is available and accessible for sampling and inspection.
 - i. An appeal inspection certificate supersedes the original or retest inspection certificate. The superseded certificate will be considered null and void as of the date of the appeal inspection certificate. The original or retest inspection certificate for the inspection being appealed must be promptly surrendered.
 - j. An appeal inspection certificate shall be issued before the close of business on the business day following the date the appeal inspection is completed.
- (1) Each appeal inspection certificate shall clearly show the word “Appeal” and the following statement: “This certificate supersedes Certificate No. _____, dated _____.”

- (2) When the results for more than one kind of service are reported on the original certificate and not all the services are appealed, use the following statement: “(Type of service) results based on appeal inspection; all other results are those of the original inspection service.”
 - (3) When the results of an appeal inspection are based on a file sample, the certificate shall show the following statement: “Quality results based on file sample.”
 - (4) If the superseded original certificate is in the custody of FGIS, the superseded certificate shall be marked “VOID.” If the superseded certificate is not in the custody of FGIS at the time the appeal certificate is issued, the following statement shall be shown on the appeal certificate: “The superseded certificate has not been surrendered.”
- k. A request for an appeal inspection shall be dismissed when:
 - (1) The scope is different from the scope of the original inspection;
 - (2) The condition of the beans have undergone a material change;
 - (3) The request specifies a file sample and a representative file sample is not available;
 - (4) The applicant requests that a new sample be obtained and a new sample cannot be obtained; or
 - (5) The reasons for the appeal inspection are frivolous.
- l. Official personnel shall notify the applicant of the proposed dismissal of service. The applicant shall then be afforded reasonable time to take corrective action or to demonstrate there is no basis for the dismissal. If the corrective action has not been adequate, the applicant shall be notified of the decision to dismiss the request for service and the results of service shall not be released.
- m. An applicant may withdraw a request for appeal inspection any time before official personnel release results, either verbally or in writing.

NOTE: Applicants who withdraw a request for service may be billed for all expenses incurred prior to withdrawal.

1.7 BOARD APPEAL INSPECTION SERVICES

- a. Any interested person who is dissatisfied with the original or appeal inspection results may appeal to the BAR. However, if the initial appeal inspection is performed by the BAR, no further appeal may be made.
- b. The Board appeal inspection shall only be performed for physically determined quality (grade) factors and shall be limited to an analysis of the file sample.
 - (1) When a request for a Board appeal inspection is filed, the file sample(s) and all other pertinent information shall be immediately submitted to the BAR.
 - (2) The FGIS field office shall act as a liaison between the BAR and the applicant.
 - (3) The Board appeal certificate shall supersede any certificate previously issued and will be the final appeal inspection service.
 - (4) Each Board appeal inspection certificate shall clearly show the words “Board Appeal” and the following statement: “This certificate supersedes Certificate No. _____, dated _____.”
 - (5) When the results for more than one kind of service are reported on the original or appeal certificate, use the following statement: “Quality results based on Board appeal inspection; all other results are those of the (original inspection and/or appeal inspection) service.”
 - (6) The following statement shall be placed on the certificate: “Quality results based on file sample.”
 - (7) If the superseded certificate is in the custody of FGIS, the superseded certificate shall be marked “VOID.” If the superseded certificate is not in the custody of FGIS at the time the Board appeal certificate is issued, the following statement shall be shown on the Board appeal certificate: “The superseded certificate has not been surrendered.”

1.8 NEW ORIGINAL INSPECTIONS

- a. When circumstances prevent a retest, an appeal, or a Board appeal inspection, an applicant may request a new original inspection on any previously inspected lot. However, a new original inspection may not be performed on an identifiable bean lot which, as a result of a previous inspection, was found to be contaminated with filth or to contain a deleterious substance.
- b. A certificate issued as a result of a new original inspection is, in fact, an original inspection certificate. It shall be based on a new sample and shall not be restricted to the scope of any previous inspection. Subsequently, the applicant for a new original inspection may request any or all of the inspection services provided for by the regulations.
- c. A new original inspection certificate shall not supersede any previously issued certificate. However, when possible, the outstanding original inspection certificate should be surrendered.

1.9 REGISTERED TYPE SAMPLE INSPECTIONS

- a. Applicants may request that the quality of beans in a lot be compared with the quality of an identified bean type sample that has been registered with an FGIS field office or Federal-State office.
- b. When a registered type sample inspection is requested, the applicant shall:
 - (1) Submit a clearly identified bean sample for an inspection for quality or other criteria.
 - (a) The sample shall not be less than 1,000 grams.
 - (b) Official personnel may require a larger sample if portions are to be sent to other offices or if the applicant requests that the sample be divided into several portions for submission to prospective buyers or brokers.

- (2) Supply the necessary containers and labels for samples to be sent to prospective buyers or brokers.
- (3) Specify, in writing, all pertinent information including the following:
 - (a) Identification of the type sample; e.g., California Pride Pintos-77.
 - (b) Grade and factor information or any other criteria information that is desired.
- c. Official personnel shall:
 - (1) Perform a grade or factor-only quality inspection as specified by the applicant and approved by the FGIS field office or Federal-State manager.
 - (2) Issue a submitted sample inspection certificate.
 - (3) Register the type sample in the field office or Federal-State office.
 - (4) Retain a representative portion of the type sample, under refrigeration, for comparison with the sample(s) obtained from identified lot(s).
 - (a) Because of limited refrigerated storage and file space, and the possibility of quality factor change due to prolonged storage, type samples shall be retained for not more than one year from the submitted sample inspection certificate issuance date.
 - (b) Notify the applicant of record at least 30 days prior to the expiration date of the type sample.
 - (c) Destroy the type sample on the expiration date.
 - (5) When requested by the applicant, send a copy of the submitted sample inspection certificate and a sample of the beans to the BAR, other FGIS field offices, or Federal-State offices that have been requested to compare the quality of an identified lot of beans against the type sample.
 - (6) If the applicant requests that one or more representative portions be divided out from the type sample for submission to prospective buyers or brokers, heat seal or glue each representative portion in a plastic bag that has a label affixed. Show the following information on the label:

- (a) The statement: “This representative portion of (beans) was taken from type sample (sample identification) and was inspected, registered, and sealed by the (USDA, FGIS or name of cooperator).”
 - (b) Office of inspection (city and state).
 - (c) Applicant (name, city, and state).
 - (d) Registration date (date).
 - (e) Expiration date (date).
 - (f) Submitted sample inspection certificate issued (identification).
 - (g) Name and signature of FGIS field office or Federal-State manager (or designee).
- (7) Issue a lot inspection certificate when the quality of an identified lot of beans is compared against the type sample. State that the quality of the beans in the lot was either “equal to or better than” or “not equal to” the type sample; i.e., “(Type of beans or grade and kind of beans). (“Quality equal to or better than” or “Quality not equal to”) (name of registered type sample).”

1.10 ORIGIN INSPECTIONS

- a. Applicants may request origin inspection certificates that show their beans are a product of the soil and industry of the United States.
- b. When an origin inspection is requested, official personnel shall:
 - (1) Request all relevant records from the applicant which may indicate the origin of the beans.
 - (2) Obtain a representative sample.

- (3) Analyze the sample to verify that the beans compare favorably with types of beans known to be grown in the United States. The size, shape, and other characteristics should be considered in making this determination.
- (4) If, after reviewing the relevant records and analyzing the beans, there is no indication that the beans are not a product of the soil and industry of the United States, show the following statement on the certificate: “The (beans) described herein and relevant records indicating the origin of these (beans) have been examined and found to be a product of the soil and industry of the United States.”
- (5) When records are not available or if the records are not sufficient to substantiate that the beans are a product of the soil and industry of the United States, but the representative sample appears to be of a type common to the United States, the following statement may be shown on the certificate: “Applicant states that these (beans) are a product of the soil and industry of the United States.”

1.11 COMBINED-LOT INSPECTIONS

- a. Any interested person may request a combined-lot inspection to be performed on single lots of beans during loading, unloading, or at rest; or after officially inspecting and certificating beans as two or more single lots.
- b. Requests for service shall be in writing and include the following:
 - (1) The estimated quantity of beans that are to be certificated as one lot;
 - (2) The contract grade, if applicable;
 - (3) The identity of the warehouse where the lot is stored, or the identity of each carrier into which the beans are being loaded or from which the beans are being unloaded; and
 - (4) Any other relevant information that official personnel require.
- c. Beans in two or more lots/carriers that are to be officially inspected as a combined-lot shall be sampled in a reasonably continuous operation. Representative samples shall be obtained from the beans in each individual carrier and inspected in accordance with the procedures as prescribed in this handbook.

- d. Beans that have been officially inspected and certificated as two or more single lots may be recertificated as a combined-lot if:
- (1) The beans in each single lot were sampled in a reasonably continuous operation;
 - (2) The original inspection certificates issued for the single lots have been surrendered to official personnel;
 - (3) Representative file samples of the single lots are available;
 - (4) The beans in the single lots are of one grade and quality;
 - (5) Official personnel who performed the inspection service for the single lots and those who recertificate the beans as a combined-lot, determine that the samples used as a basis for the inspection of the beans in the single lots were representative at the time of sampling and have not changed in quality or condition; and
 - (6) The quality or condition of the beans meet uniformity requirements (see section 2.9) established by this handbook.

NOTE: For recertification of single-lots as a combined lot, the request for service shall be filed not later than two business days after the latest inspection date of the single lots.

- e. Official factor and official criteria information shown on a certificate for beans in a combined-lot shall be based on the weighted or mathematical averages of the analysis of the sublots in the lot.
- f. If beans in a combined-lot are offered for official inspection as they are being loaded aboard a carrier and the beans, or a portion of the beans, in a lot are found to be weevily, the applicant shall be notified and shall be given the option of:
- (1) Removing the weevily beans from the lot; or
 - (2) Receiving a grade certificate with a sample grade designation indicating that the entire lot is weevily.

- g. Samples obtained from beans officially inspected as a combined-lot shall be examined for uniformity of quality (see section 2.9). If the beans in the samples are found to be uniform in quality and the beans are loaded aboard or are unloaded from the carriers in a reasonably continuous operation (i.e., at least one lot or subplot must be loaded or unloaded during any 88-hour period), the beans in the combined-lot shall be officially inspected and certificated as one lot. The requirements of this paragraph, with respect to reasonably continuous loading or unloading, do not apply to beans which are at rest in carriers or in a warehouse when the beans are offered for inspection.
- h. When beans officially inspected as a combined lot are found to be not uniform in quality or if the beans are not loaded or unloaded in a reasonably continuous operation, the beans in each portion, and any beans which are loaded or unloaded at different times, shall be officially sampled, inspected, graded, and certificated as single lots.
- i. Each official certificate for a combined-lot inspection service shall show the identification for the “combined-lot” or, at the request of the applicant, the identification of each carrier in the combined-lot. If the identification of each carrier is not shown, the statement “Carrier identification available on official inspection log” shall be shown on the inspection certificate in the space provided for “Remarks.” The identification and any seal information for the carriers may be shown on the reverse side of the inspection certificate, provided the statement “See reverse side” is shown on the face of the certificate in the space provided for “Remarks.”
- j. If a request for a combined-lot inspection service is filed after the beans have been officially inspected and certificated as single lots, the combined-lot inspection certificate shall show:
 - (1) The date of inspection of the beans in the combined-lot (if the single lots were inspected on different dates, the latest of the dates shall be shown);
 - (2) A serial number, other than the serial numbers of the official inspection certificates that are to be superseded;
 - (3) The location of the beans, if at rest, or the name of the facility from which or into which the beans in the combined-lot were loaded or unloaded;
 - (4) A statement showing the approximate quantity of beans in the combined-lot;

- (5) A completed statement showing the identification of any superseded certificates; and
 - (6) If at the time of issuing the combined-lot inspection certificate, the superseded certificates are not in the custody of the official personnel, a statement indicating that the superseded certificates have not been surrendered shall be clearly shown in the space provided for remarks. If the superseded certificates are in the custody of official personnel, the superseded certificates shall be clearly marked "Void."
- k. After a combined-lot inspection certificate has been issued, there shall be no further combining and no dividing of the certificate.
- l. No combined-lot inspection certificate shall be issued:
- (1) For any official inspection service other than as described in this handbook; or,
 - (2) Which shows a quantity of beans in excess of the quantity in the single lots.

1.12 OTHERWISE GRADE INSPECTIONS

- a. Any interested person may request information as to what the quality of beans in a lot/sample would "otherwise grade" if the results of one or more factors were not considered.
- b. When requested, official personnel shall:
 - (1) Determine and show the actual grade of the lot/sample in the space provided for the grade designation.
 - (2) Show the grade determining factors and results of analysis in the factor information space.
 - (3) Show the following statement in the Remarks section of the certificate: "(Desired grade and kind) except for (factor(s) that prevent the lot/sample from being assigned the desired grade)."

EXAMPLE: An application is received to inspect a bean lot which is supposed to be U.S. No. 1 Pinto Beans. The inspection results show that the beans grade U.S. Substandard because of 1.7 percent foreign material. The beans, except for the factor foreign material, are U.S. No. 1.

Grade Designation - U.S. Substandard Pinto Beans.

Remarks Statement - "U.S. No. 1 Pinto Beans except for foreign material."

1.13 FACTOR ONLY INSPECTIONS

- a. Any interested person may request a factor only inspection to be performed on any lot/sample of beans.
- b. Requests for service must specify the factor(s) or other criteria for which analysis is required. "Other criteria" includes, but is not limited to: test weight, and specifications prescribed by Federal agencies, trade associations, and contracts.
- c. When requested, official personnel shall:
 - (1) Determine the factor results according to the procedures in this handbook or as approved in specific cases by FGIS Headquarters.
 - (2) Show the factor results on the inspection certificate according to the procedures in Chapter 4 of this handbook.
 - (3) Show the class of the beans on the gradeline of the certificate; e.g., "Pinto Beans."

REFERENCE PUBLICATIONS

The following publications are referenced in this handbook. Copies may be obtained, upon request, from the Federal Grain Inspection Service.

1. Agricultural Marketing Act of 1946, as amended, and the regulations thereunder.
2. United States Standards for Beans.
3. FGIS Equipment Handbook.
4. FGIS Mechanical Sampling Systems Handbook.
5. FGIS Directive 9170.3, "Forwarding Samples to the Technical Services Division."
6. FGIS Directive 9170.13, "Uniform File Sample Retention System."
7. FGIS Conversion Charts for Motomco Moisture Meters.

Attachment 2
BEAN INSPECTION HANDBOOK
Chapter 1
General
4/01/99

FORM FGIS-955, "APPLICATION FOR INSPECTION UNDER THE AGRICULTURAL MARKETING ACT"

Part 68.8 of the Agricultural Marketing Act of 1946, as amended, requires that an application for inspection must be made prior to performance of service.

FORM APPROVED: OMB 0580-0013

U.S. DEPARTMENT OF AGRICULTURE FEDERAL GRAIN INSPECTION SERVICE APPLICATION FOR INSPECTION UNDER THE AGRICULTURAL MARKETING ACT OF 1946		Public reporting burden for this collection of information is estimated to average .17 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the form. Send comments regarding this burden estimate or any other aspects of this collection of information including suggestions for reducing the burden to USDA, OIRM, Clearance Officer, Room 404-W, Washington, DC 20250. When replying refer to the OMB Number and form number in your letter.	
Pursuant to Section 203(h) of the Agricultural Marketing Act of 1946, as amended (7 U.S.C. 1622) and the regulations and standards thereunder (7 CFR Parts 57, and 68), we hereby apply for an inspection of the commodity described below.			
1. TYPE OF INSPECTION a. (Check one) <input type="checkbox"/> ORIGINAL LOT <input type="checkbox"/> APPEAL MULTIPLE LOT <input type="checkbox"/> NEW INSPECTION SUBMITTED SAMPLE <input type="checkbox"/> RETEST b. (Check one)			
2. SERVICE REQUESTED <input type="checkbox"/> INSPECT FOR GRADE AND FACTOR <input type="checkbox"/> INSPECT FOR FACTORS ONLY <input type="checkbox"/> INSPECT FOR CONDITION <input type="checkbox"/> CHECK-COUNT <input type="checkbox"/> CHECK-WEIGHT <input type="checkbox"/> CHECK-LOAD <input type="checkbox"/> OTHER (list under remarks)			
3. COMMODITY (Kind)		4. LOCATION OF COMMODITY	
5. CONTRACT NO. (If any)		6. CARRIER OR OTHER IDENTIFICATION	
7. GRADE AND KIND (Factor or specifications)			
8. QUANTITY (Specify in bushels, pounds, etc.)		9. NUMBER AND KIND OF CONTAINERS	
10. CONTAINER MARKINGS			
11. NAME AND ADDRESS (Includes ZIP Code) OF APPLICANT (Firm name)		12. IF APPLICATION IS BY AGENT, NAME AND ADDRESS (Including ZIP Code) OF AGENT (Firm Name)	
13. NAME AND ADDRESS (Include ZIP Code) OF CONSIGNEE			
14. IF APPLICATION IS FOR A RETEST OR APPEAL INSPECTION, NAME(S) AND ADDRESS(ES) OF OTHER INTERESTED PARTIES, IF ANY (If none, so state).			
15. REMARKS			
In submitting this application, I expressly agree that the fees and charges for the inspection shall be assessable to and payable by me and hereby certify that I am a financially interested party or an authorized agent thereof. 18 U.S.C. 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both, for false or fraudulent statements made to an agency of the United States. I declare that the foregoing statements are true to the best of my knowledge, information, and belief.			
16. DATE	17. NAME OF FIRM		18. SIGNATURE OF PERSON MAKING APPLICATION
19. FOR USE BY FGIS			
APPLICATION RECEIVED BY	DATE	TIME	OFFICE
CERTIFICATE NO. OR NOS.			
AMOUNT OF DEPOSIT (If any)	FEES AND CHARGES		AMOUNT RETURNED TO APPLICANT (If any)

FORM FGIS-955

**INSTRUCTIONS FOR COMPLETING FORM FGIS-955, “APPLICATION
FOR INSPECTION UNDER THE AGRICULTURAL MARKETING ACT”**

NOTE: The numbers coincide with the numbered blocks on the form.

- (1) Check a box on both line a and line b to indicate the type of inspection being requested.
- (2) Check the box(s) that indicates the type(s) of service(s) being requested.
- (3) Show “beans.”
- (4) Show the location of the commodity.
- (5) Show the contract number only if it is to be shown on the inspection certificate.
- (6) Show the complete name and/or number of the carrier or other lot identifier; e.g., warehouse number.

For submitted samples, show any unique word(s) or alphanumeric identifier.

- (7) Show the contract grade (or expected grade), kind, class, special grade, other specifications, or requirements.
- (8) Show the net and/or gross weight in pounds, kilograms, or hundredweights. Also show net weight if required for billing purposes.
- (9) Show the number and kind of containers.
- (10) Show the container markings. If there are no markings, show “None.” For bulk beans, show “Bulk.”
- (11) Show the name and address of the applicant; i.e., the party that will be billed for the service.

- (12) If applicable, show the name and address of the agent or person submitting the application.
- (13) Show the name and address of the consignee if this information is to be shown on the inspection certificate.
- (14) For appeal inspection requests only, show the name(s) and address(es) of all interested parties. If there are none, show "None."
- (15) Show load order number, warehouse receipt number, and any other pertinent information or statements.
- (16) Show the date the application is submitted.
- (17) Show the name of the person, firm, company, or organization that should be billed for the service. If same as "Applicant," show "Same."
- (18) Show the signature of the person who is making the application.
- (19) FOR USE BY FGIS.

CHAPTER 2

SAMPLING

2.1	SAFETY.....	2-1
2.2	REPRESENTATIVE SAMPLE.....	2-4
2.3	DETAILED WORK RECORD (SAMPLE TICKET).....	2-4
2.4	LOT ACCESSIBILITY.....	2-5
2.5	SAMPLE HANDLING AND SECURITY.....	2-7
2.6	EXAMINATION OF PLANTS.....	2-8
2.7	EXAMINATION OF FILLED CONTAINERS.....	2-9
2.8	EXAMINATION OF CARRIERS.....	2-9
2.9	EXAMINATION OF SAMPLE PORTIONS.....	2-10
2.10	SAMPLING CONTAINERS OF BEANS IN WAREHOUSES.....	2-10
2.11	SAMPLING CONTAINERS OF BEANS IN CARRIERS.....	2-13
2.12	SAMPLING BULK BEANS AT REST.....	2-15
2.13	SAMPLING BULK BEANS DURING MOVEMENT.....	2-20

2.1 SAFETY

Official personnel ¹ shall adhere to the following guidelines:

- a. Comply with all pertinent Occupational Safety and Health Administration (OSHA) requirements (e.g., 29 CFR 1910-1918); follow all safety/sanitation rules in effect at the plant or warehouse; obey all posted warning signs and wear appropriate protective equipment when conditions warrant; and, when practical, carry a two-way radio for communication.
- b. Wear a Sterns life vest, model IWV-222-1 (if not available, any U.S. Coast Guard-approved Type I, II, III, or V PFD life vests may be worn), when aboard barges or other vessels (midstream or dockside).

NOTE: Life vests must be international orange in color and contain retro-reflective panels. If used at night, the vest must be equipped with a light and a whistle.

- c. Wear hard hats that meet the American National Standards Institutes (ANSI) Z89.1 or Z89.2 criteria. It is also recommended that official personnel wear shoes or boots that have nonslip soles and definite heels for good footing on ladders, wear clothes that are reasonably close fitting to reduce the possibility of becoming snagged on ladders or other structural elements, and wear gloves when climbing ladders and opening or closing hatches and doors.
- d. Check the gangway before boarding or disembarking barges and other vessels. Do not use defective gangways. Exercise extreme care when using ladders that are permanently affixed to the carrier wall. Do not hand carry sampling equipment, radios, or other equipment while climbing ladders.

¹ The requirements referenced in this section are mandatory for FGIS employees. All others are strongly encouraged to also follow these guidelines.

- e. Remain alert to your physical condition, especially when drawing samples inside carriers. Beans are sometimes treated with chemicals, usually for the purpose of controlling insect infestation. Contact with toxic fumes or sprays from these chemicals can cause serious injury or death. Shortness of breath, light-headedness, drowsiness, or a headache can be indicative of a dangerous atmosphere. When these symptoms are experienced, leave the area immediately and seek medical attention.
- f. Travel to and from barges at midstream and other vessels at anchor via U.S. Coast Guard-approved launch, tugboat, licensed water taxi; or by Federal Aviation Administration-approved helicopter or air taxi. Do not jump on or off a barge or other vessel. You must be able to step easily from the launch to the vessel (or vessel to launch) without stretching or straining over water; expect slippery or obstructed deck conditions when boarding a vessel.
- g. While walking on a dock or wharf, be alert for loose or rotting boards that may not support your weight. Learn the locations of life rings, emergency ladders, and telephones. Stay clear of cables whether slack or under tension.
- h. Do not probe sample barges at night unless the barge is docked and sufficient artificial light is provided. Use caution when walking on decks and barge tops since they are uneven, slippery when wet, and have protruding cleats and latches. Do not remain on barges while they are being moved and be aware of nearby barges, docks, or vessels which could collide with the barge you are working on. Require the applicant for inspection to roll back the roll-top covers and to lock them in place with lock pins. Do not permit hatches to be opened or closed while you are inside the barge.
- i. Do not walk through a break in a string of trucks separated by only a few feet. Be alert to such hazards as moving trucks, cables, debris, metal strapping, or broken ladders; and avoid breathing diesel exhaust fumes.
- j. Before entering a railyard, notify your immediate supervisor, the yardmaster, or switch-crew foreman, and any other essential persons of your presence. Do not sample railcars in a railyard alone unless you are being monitored by someone who is in a position to render aid if needed. (Inquire about possible switching activities, cars carrying hazardous cargo, and any other unusual activity.)

BEAN INSPECTION HANDBOOK

Chapter 2

Sampling

4/01/99

- k. Require that all activity cease on the track where you are working. Require the track to be locked out, or derails installed at both ends of the string of cars, or other appropriate, locally approved precautions; e.g., using blue flags with radio communication between you and the switch engine driver, using one or more additional employees as a safety observer to warn off approaching railcars, or using blue flags on an elevator hold-track where no railcar or switch engine movement takes place during the performance of official functions.
- l. Do not probe sample railcars at night unless adequate artificial light is provided. Do not walk on the rails (walk parallel to the set of tracks and never between the two rails). Ensure that no power lines are close enough to present a hazard (minimum safe distance - 25 feet vertically and horizontally).
- m. Check for placarded railcars. If a car is or is not placarded and a fumigant odor is detected, withhold the inspection (do not enter the car or sample the commodity) and notify your supervisor immediately.
- n. Never crawl under railcars. Avoid climbing through railcars and over couplings and never walk through a break in a string of railcars separated by only a few feet (minimum safe distance - 20 feet). Be alert to such hazards as moving railcars, cables, debris along tracks, metal strapping, or broken ladders hanging from railcars.
- o. Be alert to seasonal conditions, such as icy walking surfaces in the winter, and rodents, snakes, scorpions, wasps, and hornets in the warmer months.
- p. Exercise caution when opening or closing car hatches or doors. If a hatch or door is stuck, request assistance from the applicant. Do not use your hands to break seals, use a cutting tool or pry bar.
- q. Do not ride on an engine or car being moved or switched. If a car starts to move while you are inside, assume a sitting or kneeling position on top of or in the car to avoid losing your balance, and hold on. Do not attempt to descend a ladder or jump to the ground until the car has stopped and you can do so safely. Report all incidents of car movement to the yardmaster or your supervisor. (Supervisors should also report such movement to either OSHA or the Federal Railroad Administration.)

- r. Notify the yardmaster (or foreman) when you leave the work area and report all “bad order cars” (e.g., missing ladder rungs, broken doors) to the car owner, the railroad, or the applicant for inspection.
- s. When working in warehouses, watch out for forklifts and tow motors. Also, be alert for sacks slipping (falling) from improperly stacked pallets.

2.2 REPRESENTATIVE SAMPLE

Obtaining a representative sample from a lot of beans is an important and essential part of the inspection process. If the sample is not representative, the inspector’s final determination will not reflect the true quality of the lot. For a sample to be considered representative, it must be:

- a. Obtained by official personnel in accordance with official procedures;
- b. Obtained using FGIS-approved equipment (see the FGIS Equipment Handbook);
- c. Of the prescribed size (approximately 2,000 grams); and
- d. Handled securely, protected from manipulation, substitution, and careless handling.

NOTE: **Frequently, a sample drawn from one lot or portion of a lot is combined with another sample(s) to form a component, subplot, or combined-lot sample. Prior to combining such samples, the sampler must ensure that the samples are proportional; i.e., samples of like size represent like amounts of grain.**

2.3 DETAILED WORK RECORD (SAMPLE TICKET)

- a. The accurate recording of the lot’s identity and its condition at the time of sampling is essential to the correct certification of the lot’s quality. Samplers must record all unusual conditions and other pertinent information on the sample ticket. If the condition is not reported on the sample ticket, the lot could be inadvertently misgraded.
- b. Sample tickets shall contain the following information:
 - (1) The sampler’s signature or initials;
 - (2) The date the sample was obtained;

- (3) The location of the lot of beans at the time of sampling (if the city and/or state in which the sampling took place is not obvious, this shall also be shown);
 - (4) Full identification of the lot;
 - (5) When applicable, information related to the condition of the carrier's storage area; and
 - (6) Any other pertinent information that may affect the grading or certification of the lot.
- c. The original or copy of the sample ticket shall be retained by the issuing office in accordance with the Files Maintenance and Records Disposition Handbook.

2.4 LOT ACCESSIBILITY

- a. The entire lot must be completely and safely accessible.
- (1) When hazardous conditions exist which could endanger the health of the sampler, consider the lot inaccessible and dismiss the service request. Hazardous conditions include, but are not limited to:
 - (a) The presence of unsafe levels of insecticide, fumigant, or other chemical odors;
 - (b) Uncontrolled railyard switching;
 - (c) Ice on top of barges, railcars, and other carriers;
 - (d) Broken or unsecured ladders;
 - (e) Low hanging electrical wires; and
 - (f) Improperly stacked pallets/danger of sack slippage (falling sacks).

NOTE: Labor and equipment necessary for making a lot accessible shall be furnished by the applicant.

- (2) If a lot is not completely accessible for sampling, dismiss the request for service or, at the applicant's request, sample that portion that is accessible and issue a "partial inspection" certificate.
- (3) When a "partial inspection" is requested, make notations on the sample ticket indicating the total number of containers in the lot and the number of containers that were accessible for sampling.

EXAMPLE: If there are 1,263 containers in a lot, but only 400 containers are accessible, the sampler's ticket should read: "Sample represents 400 containers only; balance of containers inaccessible for sampling; total containers in lot 1,263."

b. For the purpose of sampling sacked beans stored in a warehouse or similar facility, the lot shall be considered accessible when a minimum of one side of each pallet in the lot is accessible for sampling.

- (1) The applicant or warehouse manager need not have every sack in the lot exposed and accessible for sampling unless requested to do so by the sampler.
- (2) It is the sampler's prerogative to request any or all sacks in the lot to be made accessible for sampling should there be any reason to suspect that the lot is not uniform in quality.
- (3) The following are some examples of when the sampler should suspect that a lot may not be uniform:
 - (a) Weathered, dirty, wet, or sour smelling sacks mixed in a lot of clean sacks. These sacks may contain beans of lower quality.
 - (b) Sacks with different markings. This could indicate the mixing of sacks from another lot which had different quality requirements.
 - (c) Sacks that appear to have trier penetration marks. These sacks may have been previously sampled, graded, and found to be of lower quality.

2.5 SAMPLE HANDLING AND SECURITY

- a. A representative sample shall never be out of the control and/or observation of the sampler. Special care shall always be taken to protect samples from manipulation, substitution, and improper handling. There are many ways in which a sample may lose its representativeness. For example, a sample shall no longer be considered representative if it is:

- (1) Spilled, no matter how little is lost or how much could be recovered.
- (2) Stored in an improper manner or in an area not under the control of official personnel. When samples are not analyzed on the same day they are obtained, store them in a cool, dry place to prevent any change in condition.
- (3) Transported by means which do not ensure the integrity of the sample.

NOTE: Official samples may be shipped via U.S. mail or commercial parcel service, provided that the samples are delivered directly to official personnel and all other necessary security precautions are taken. Such precautions may include enclosing the sample bag in a mail bag secured by a metal seal, if warranted.

- b. Lockboxes or other security containers may be provided by the applicant at plants where official services are performed on a continuing basis. The lockboxes shall be:
- (1) Of sufficient size to contain samples, sampling supplies and equipment, and checkweighing scales. It is not intended that items, such as dividers and probes, be stored in the lockbox.
 - (2) Placed in the immediate work area. Lockboxes shall not be placed in the basement or other remote locations. If it is impossible or impractical to locate the lockboxes in the immediate sampling area, a portable, lockable container, such as a locked metal pail, should be used.
 - (3) Equipped with a hasp for a padlock. Padlocks shall be provided by official personnel and, under no circumstances, shall keys to the padlocks be issued to or made accessible to unauthorized persons.

2.6 EXAMINATION OF PLANTS¹

- a. Official personnel shall examine or survey bean plants for insanitary conditions when:
 - (1) Required by Federal law or purchase contract;
 - (2) Required by FGIS Program Directive;
 - (3) Requested by the applicant for official services; or
 - (4) Deemed necessary by official personnel.
- b. Insanitary conditions shall include those conditions that, in the opinion of official personnel, would render the beans unfit for human consumption but which may not be adequately reflected by the grade assigned to the beans. Insanitary conditions shall include, but not be limited to, the presence of:
 - (1) Vermin or insects;
 - (2) Toxic substances;
 - (3) Decayed animal or vegetable matter;
 - (4) Other filth; and
 - (5) Harmful substances, such as broken glass and metal shavings.
- c. If the plant is approved as a result of the survey, official inspection services may begin or continue at a time agreed upon by plant management and official personnel.
- d. If the plant is not approved as a result of the survey, official inspection services shall be conditionally withheld pursuant to the procedures in section 868.24 of the regulations under the Act, the FGIS “Sanitation Inspection Handbook,” and FGIS Program Directive 9100.3.

¹ The premises, buildings, structures, and equipment (including but not limited to, machines, utensils, vehicles, and fixtures located in or about the premises) used or employed in the preparation, processing, holding, transporting, and storage of beans. Establishments engaged only in the harvesting, storage, or distribution of beans prior to the beans being cleaned or otherwise processed for human consumption, are not considered as “plants” for the purpose of this directive.

2.7 EXAMINATION OF FILLED CONTAINERS

- a. Official personnel shall examine filled containers to determine whether the beans being offered for inspection may have been contaminated or may become contaminated as a result of the condition of the container.
- b. Filled container examinations include checking the containers, such as burlap, jute, cotton, kraft (paper), or polypropylene bags; cases; or bales to determine whether they are free from dirt, stains, tears, live or dead insects, insect webbing, and insect refuse.
- c. If adverse conditions are found, note the conditions, kind of containers, and container markings on the sample ticket and in the “Remarks” section of the certificate.

2.8 EXAMINATION OF CARRIERS

- a. When beans are to be sampled during loading, examine the carrier prior to loading (and when appropriate, the containers or sacks) for conditions that could adversely affect the quality of the beans. (See FGIS Program Directive 9180.48, “Stowage Examinations.”) Adverse conditions include, but are not limited to, the presence of:
 - (1) Live weevils or other injurious insects;
 - (2) Odors of previously transported cargoes;
 - (3) Water;
 - (4) Out-of-condition beans or other commodities;
 - (5) Decaying animal or vegetable matter;
 - (6) Protruding objects which may damage the containers;
 - (7) Holes in the carrier’s roof, sides, or floor; and
 - (8) Rust scale, dirt, chemicals, and unknown substances.

- b. Record the results of the examination on a sample ticket, inspection log, general service or stowage examination worksheet, or other work record.
- c. If no adverse conditions are found, sampling/loading may begin or continue at a time agreed upon by the plant management and official personnel.
- d. If adverse conditions are found, official inspection service shall be conditionally withheld pursuant to the procedures in section 868.24 of the regulations under the Act.

NOTE: **When beans are sampled after loading, examine the accessible portions of the carrier and note any adverse conditions on the sample ticket and in the “Remarks” section of the certificate.**

2.9 EXAMINATION OF SAMPLE PORTIONS

Compare each sample portion taken from a lot with other sample portions drawn from the same lot for uniformity of quality and condition.

- a. If all sample portions are uniform, composite the portions together.
- b. If any sample portion is considered to be of distinctly different class, quality, or condition from the remainder of the sample portions, draw separate samples from the portion of the lot that contains the distinctly different beans, the remainder of the lot, and the entire lot. Keep the samples in separate containers and note on the respective sample tickets the estimated quantity of the lot represented by each sample.

2.10 SAMPLING CONTAINERS OF BEANS IN WAREHOUSES

- a. Randomly select an appropriate number of containers from the lot.
 - (1) Determine the number of containers in the lot.
 - (2) Determine the minimum number of containers from which samples need to be drawn (see Table 1).

Table 1 - Sampling Rate

Containers ¹ in lot	Sample Size	Containers in Lot	Sample Size	Containers in Lot	Sample Size
100 or less	10				
101 - 121	11	1,601 - 1,681	41	4,901 - 5,041	71
122 - 144	12	1,682 - 1,764	42	5,042 - 5,184	72
145 - 169	13	1,765 - 1,849	43	5,185 - 5,329	73
170 - 196	14	1,850 - 1,936	44	5,330 - 5,476	74
197 - 225	15	1,937 - 2,025	45	5,477 - 5,625	75
226 - 256	16	2,026 - 2,116	46	5,626 - 5,776	76
257 - 289	17	2,117 - 2,209	47	5,777 - 5,929	77
290 - 324	18	2,210 - 2,304	48	5,930 - 6,084	78
325 - 361	19	2,305 - 2,401	49	6,085 - 6,241	79
362 - 400	20	2,402 - 2,500	50	6,242 - 6,400	80
401 - 441	21	2,501 - 2,601	51	6,401 - 6,561	81
442 - 484	22	2,602 - 2,704	52	6,562 - 6,724	82
485 - 529	23	2,705 - 2,809	53	6,725 - 6,889	83
530 - 576	24	2,810 - 2,916	54	6,890 - 7,056	84
577 - 625	25	2,917 - 3,025	55	7,057 - 7,225	85
626 - 676	26	3,026 - 3,136	56	7,226 - 7,396	86
677 - 729	27	3,137 - 3,249	57	7,397 - 7,569	87
730 - 784	28	3,250 - 3,364	58	7,570 - 7,744	88
785 - 841	29	3,365 - 3,481	59	7,745 - 7,921	89
842 - 900	30	3,482 - 3,600	60	7,922 - 8,100	90
901 - 961	31	3,601 - 3,721	61	8,101 - 8,281	91
962 - 1,024	32	3,722 - 3,844	62	8,282 - 8,464	92
1,025 - 1,089	33	3,845 - 3,969	63	8,465 - 8,649	93
1,090 - 1,156	34	3,970 - 4,096	64	8,650 - 8,836	94
1,157 - 1,225	35	4,097 - 4,225	65	8,837 - 9,025	95
1,226 - 1,296	36	4,226 - 4,356	66	9,026 - 9,216	96
1,297 - 1,369	37	4,357 - 4,489	67	9,217 - 9,409	97
1,370 - 1,444	38	4,490 - 4,624	68	9,410 - 9,604	98
1,445 - 1,521	39	4,625 - 4,761	69	9,605 - 9,801	99
1,522 - 1,600	40	4,762 - 4,900	70	9,802 - 10,000	100
NOTE: For lots packed in primary and secondary containers, the number of secondary (outer) containers in the lot is used to determine the number of containers to be sampled.					

¹ If the lot contains more than 10,000 containers, divide the lot into 2 or more (approximately) equal-sized sublots of 10,000 containers or less, and sample each subplot separately.

- b. Draw a sample from each selected container using an approved bean sack trier (see List of Approved Equipment - Equipment Handbook) of sufficient length to reach the center of the container, a compartmented trier of sufficient length to reach the bottom of the container, or a ladle.
- (1) When sampling beans in large-sized containers (22.25 kilograms/50 pounds or more), use a bean sack trier or a compartmented trier.
 - (2) For sampling beans in medium-sized containers (4.5 to 22.24 kilograms/10 to 49.9 pounds), use a bean sack trier.
 - (3) For sampling beans in small-sized containers (less than 4.5 kilograms/10 pounds), use a ladle or take the entire contents of selected individual containers for the sample.
- c. Draw a sample with a sack trier as follows:
- (1) Insert the trier into the sack.
 - (2) Give the inserted trier two or three short in-and-out motions to allow a free flow of product through the trier into a sample container.
 - (3) Examine the sample for uniformity (class, quality, and condition). If uniform, combine the sample with other samples of equal quality from the same lot.

NOTE: Close all sack holes made during sampling.

- d. Draw a sample with a compartmented trier as follows:
- (1) Stand the container on end and insert the trier into the top of the container.
 - (2) Move the trier diagonally through the container until the end of the trier touches the bottom corner opposite the top corner from which it was inserted.
 - (3) Open the trier with the slots facing upward.
 - (4) While the slots are open, give the trier two or three short up-and-down motions so that the compartments in the trier can be filled.
 - (5) Close the trier gently to avoid damaging the beans, withdraw the trier, and place its contents full length on a sampling cloth.

- (6) Examine the sample for uniformity (class, quality and condition). If uniform, combine the sample with other beans of equal quality from the same lot, subplot, or component.
- e. After samples have been taken from a lot offered for inspection, the applicant is responsible for closing all open containers from which samples have been drawn and replacing containers taken as samples. If the applicant does not replace the containers that were removed or properly seal the containers which were left open, note on the sample ticket the number of whole/sealed containers remaining after sampling.
- f. When sampling containers during movement (online), draw a sample from one of the first five containers that are packed, a sample from one of the last five containers, and the remaining samples at proportionate intervals during the packing of the lot.

2.11 SAMPLING CONTAINERS OF BEANS IN CARRIERS

- a. When an applicant requests the inspection of a lot of beans in containers that are already loaded into a railcar, truck, or other carrier, the containers shall be considered to be accessible for inspection when “wells” are dug at the location and depth indicated by the sampler.

NOTE: Labor and equipment for digging the necessary “wells” shall be furnished by the applicant.

- b. Select the containers for sampling as follows:
 - (1) Mentally divide the carrier into areas (A1, A2, D, B1, and B2) and sections (three sections for all areas but D; two sections for D). See Figure 1.

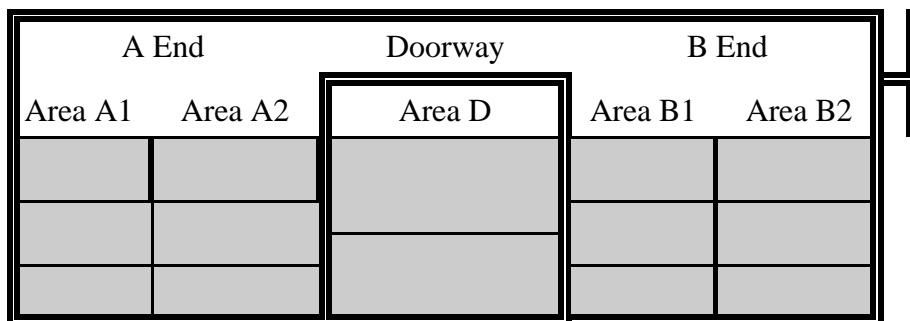


Figure 1. Side View - Areas and Sections of a Boxcar

- (2) Six bags must be randomly selected from each of the areas identified as A1, A2, B1, and B2. Ten bags must be selected from area D. If the car is not loaded uniformly (e.g., area D is loaded six bags high, while areas A and B are loaded twelve bags high), select more bags from the areas containing more bags and less from those containing less, but always select at least 34 bags, total.
- (3) Determine the locations where the wells must be dug so that the proper number of bags may be sampled from each section. (Whenever possible, limit the number of wells that must be dug to three, but dig the wells as deep as possible.) See Figure 2.

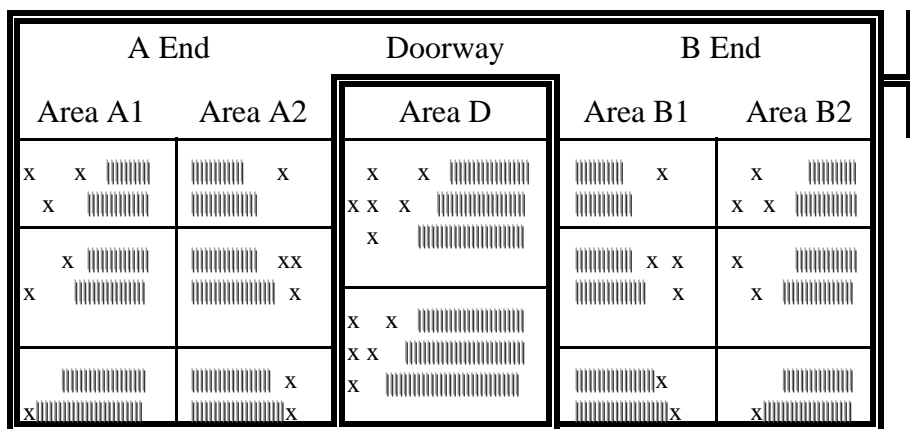


Figure 2. Side View of a Railcar with Three Wells, Selected Bags Indicated by X Marks

- (4) Randomly select the sacks to be sampled from the sacks removed when making a well and from the exposed bags forming the well sides. (Use of random number cards/tables is optional.)

- (5) Draw the sample portions. It is very important that approximately the same amount of sample be taken from each sack.

2.12 SAMPLING BULK BEANS AT REST

- a. Use an approved double-tubed compartmented trier (see List of Approved Equipment - Equipment Handbook) of sufficient length to reach the bottom of the carrier.

<u>Carrier</u>	<u>Length of Trier</u>	<u>Compartments</u>
Barge	12-foot	20
Hopper Car	10- or 12-foot	20
Box Car	6-foot	12
Truck	5- or 6-foot	11 or 12
Hopper Truck	6-, 8-, or 10-foot	12, 16, or 20

- b. Sample bulk beans at rest in a carrier as follows:
- (1) Visually examine the lot at rest in the carrier. Record any unusual conditions on the sample ticket.
 - (2) Spread your canvas and make sure that it and the trier are clean and dry.
 - (3) For each type of carrier, there is an established sampling pattern (see pages 2-16 to 2-19). Probe the beans in the areas identified by the sampling pattern for the particular carrier.
 - (4) Insert the trier at a ten degree angle from the vertical, with the slots facing upward and completely closed.
 - (5) After the trier is fully inserted (with the slots facing upward), open the slots and move the trier up and down quickly in two, short motions.
 - (6) Close the slots very gently so as not to damage the beans, grasp the trier by the outer tube, and withdraw it from the lot. Do not pull trier by handle.

- (7) Empty the trier on the canvas and compare the beans from each depth of the trier for uniformity of class, quality, and condition. Also compare the sample portion to others drawn from the same lot. If all sample portions are uniform, they shall be composited and placed in a sample bag along with a completed sample ticket.

NOTE: If the trier does not reach the bottom of the carrier, note the depth that is reached on the sample ticket.

c. The following diagrams show the standard sampling patterns. Each lot shall be probed in as many additional locations as are necessary to assure that the sample is the required size and representative of the lot.

- (1) Additional probes shall be drawn in a balanced manner. For example, one compartment of a hopper car shall not be probed twice unless the other compartments are also probed twice, regardless of the amount of beans in any one compartment or the amount of additional sample needed.
- (2) The sampling patterns in this section shall be used by all official inspection personnel when sampling beans at rest. Insert the probe at the points marked (X), with the tip of the probe pointed toward the direction of the arrow head. When two arrow heads are shown, the tip of the probe may be pointed in either direction.
- (3) Sampling Pattern for Barges. Draw one probe sample from each opening in the direction of the arrow head. Insert the probe in the center of the opening, approximately 7 feet from the side edge.

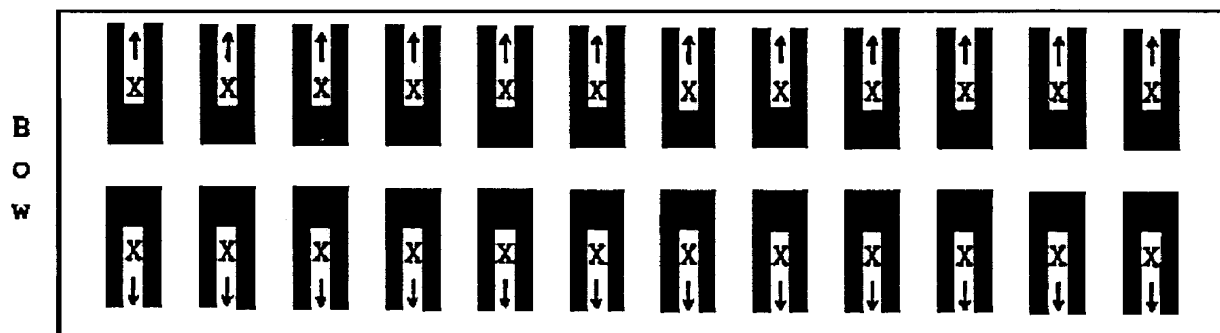


Figure 3. Fiberglass Hatch Top Barge

- (4) Sampling Pattern for Hopper Cars. Insert probe in the direction of the arrow at an approximately 10-degree angle, the probe may be inserted either in the center of each hopper or slightly off center in order to miss the cross beam.

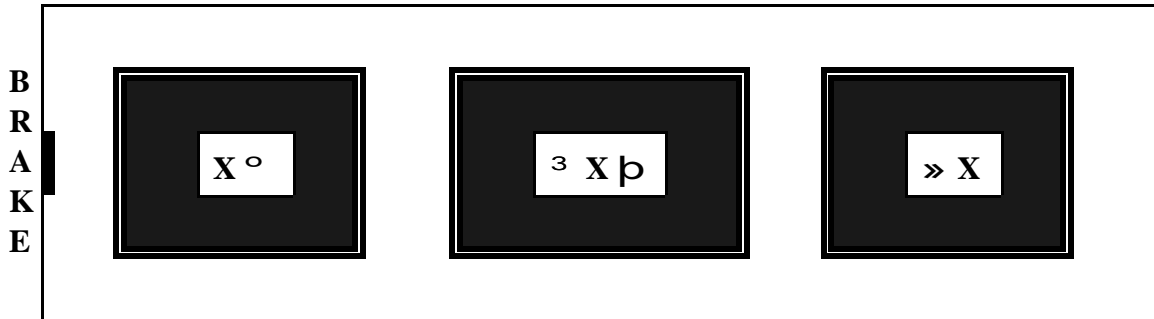


Figure 4. 3-Compartment, Trough or Door Type Hopper Car

- (5) Sampling Pattern for Box Cars. Insert the probe at an approximately 10-degree angle in the direction of the arrows shown in the diagram. The probe pattern shown may also be used in reverse of the one shown.

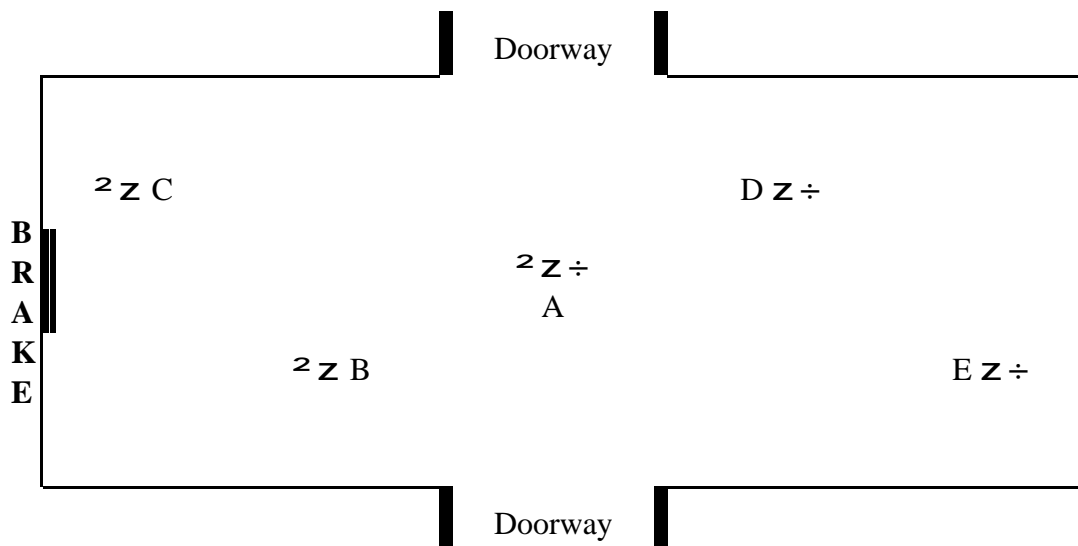


Figure 5. Boxcar

- (6) Sampling Patterns for Trucks. Insert the probe at an approximately 10-degree angle in the direction of the arrows shown in the diagram. The probe pattern shown may also be used in reverse of the one shown.

- (a) Flat-Bottom Trucks or Trailers Containing Beans More than 4 Feet Deep or Eight Filled Probe Compartments.

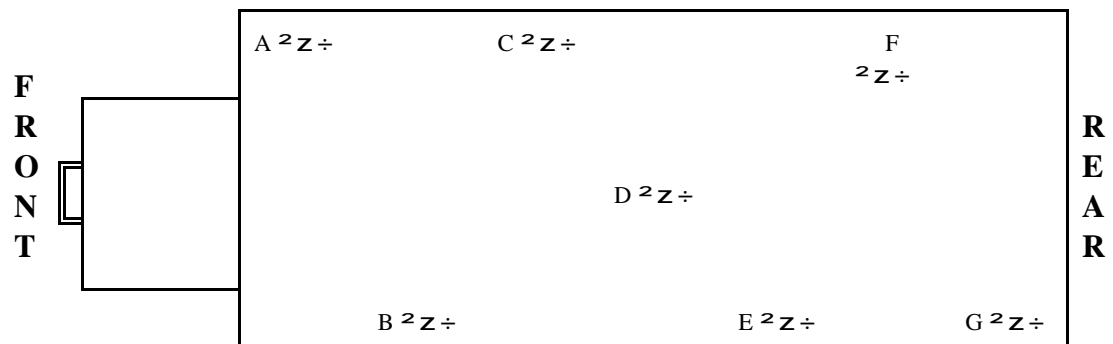


Figure 6. Flat-Bottom Truck or Trailer

- (b) Flat-Bottom Trucks or Trailers Containing Beans Less than 4 Feet Deep or Fewer than Eight Filled Probe Compartments.

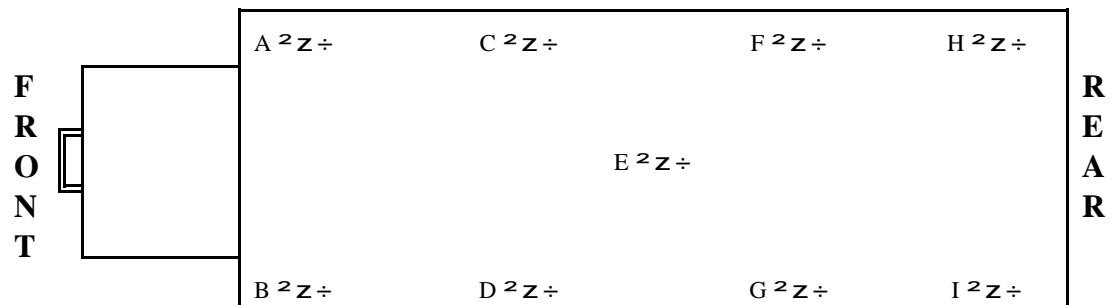


Figure 7. Flat-Bottom Truck and Trailer

- (7) Sampling Pattern for Hopper-Bottom Containers, Trucks, and Trailers. Insert the probe at an approximately 10-degree angle in the direction of the arrows shown in the diagram.

Figure 8. Aluminum Hopper-Bottom Container

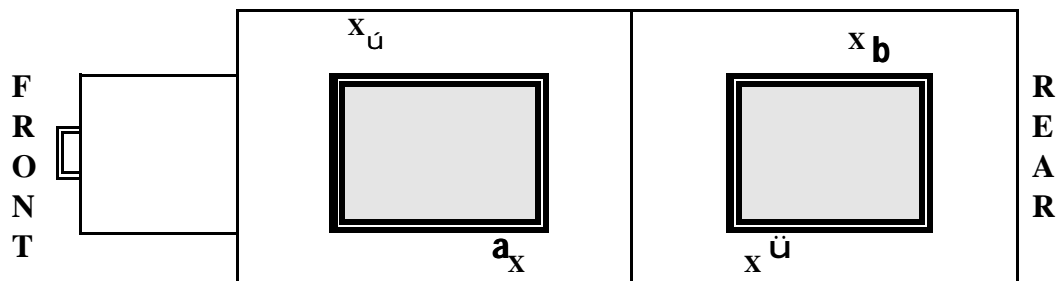
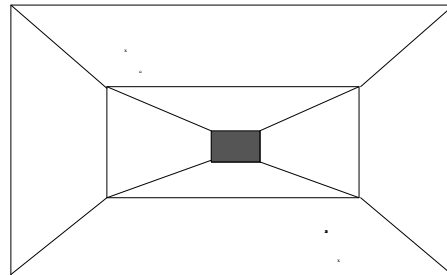


Figure 9. Hopper-Bottom Truck and Trailer

- d. Sample bulk beans in tote bags (i.e., large flexible containers holding 500 - 3000 pounds of beans).
 - (1) For lots of 1 to 4 tote bags, draw a total of no less than five probe samples from the entire lot. Always draw the same number of probe samples from each bag.
 - (2) For lots of 5 to 9 tote bags, draw at least one probe sample from each bag. Always draw the same number of probe samples from each bag.
 - (3) For lots of 10 to 40 tote bags, draw no less than ten probe samples from the entire lot. Randomly select the bags to be probed, draw no more than one probe sample from each selected bag.

- (4) For lots of 41 or more tote bags, draw one probe sample from at least 25 percent of the bags in the lot or ten probe samples from the entire lot, whichever is greater. Randomly select the bags to be probed, draw no more than one probe sample from each selected bag.

2.13 SAMPLING BULK BEANS DURING MOVEMENT

- a. Diverter-Type Mechanical Sampler. FGIS tested and approved diverter-type mechanical samplers (D/T) may be used to sample bulk beans during movement. (See the FGIS Mechanical Sampling Systems Handbook for testing and approval information.)
 - (1) Prior to using a D/T, ensure that the system is clean and free from beans or debris from a previous shipment.
 - (2) For sampling beans as they are being placed in sacks or similar containers, set the D/T counter switch so that the pelican will traverse the stream at least once every 25 containers.
 - (3) For sampling beans being loaded into bulk carriers, set the timer in accordance with prescribed procedures in the FGIS Mechanical Sampling Systems Handbook.
- b. Pelican Sampler. FGIS-approved pelican samplers may be used to sample beans in a falling stream.
 - (1) To draw a sample using the pelican, first grasp the pelican's handle firmly. Then, swing the pelican completely through the stream in one continuous motion. This is known as taking a "cut."
 - (2) The following is the minimum number of "cuts" required:

Hopper Car	-	2 cuts per compartment
Boxcar	-	4 cuts per carrier
Truck	-	2 cuts per carrier
Barge/Ship	-	1 cut per 13,500 kilograms (30,000 lbs.)

WARNING: Sampling a free-falling stream of beans with a pelican sampler can be dangerous. Assure yourself of firm, nonskid footing. Retrieving lines may be attached to the handle of the pelican and the carrier. Do not tie retrieving lines to a person.

- c. Ellis Cup. FGIS-approved Ellis cup samplers may be used for sampling beans moving on a conveyor belt.

(1) Draw a sample using the Ellis cup as follows:

- (a) Hold the Ellis cup firmly and upright, with the sides of the cup parallel to the sides of the conveyor belt, and with the open end of the cup facing the oncoming flow.
- (b) Push the curved portion of the cup straight down in the center of the stream to the full depth of the beans. After filling, withdraw the cup and empty it.
- (c) Then, immediately draw two more portions from the stream; one to the left of center and one to the right of center. This is known as taking a “set” of samples.

NOTE: When drawing samples with an Ellis cup from beans in a narrow stream or on a slow moving conveyor belt, all portions may be taken from the center of the stream and portions may be drawn in a delayed manner, as necessary.

(2) The following is the minimum number of “sets” required:

Hopper Car	-	1 set per compartment
Boxcar	-	2 sets per carrier
Truck	-	1 set per carrier
Barge/Ship	-	1 set per 13,500 kilograms (30,000 lbs.)

WARNING: Ensure that you have good footing to avoid falling onto the belt and that a U-shaped protective guard rail is installed not less than 2 feet above each belt and secured to the floor.

CHAPTER 3

INSPECTION

3.1	DEFINITIONS.....	3-1
3.2	GRADES AND GRADE REQUIREMENTS.....	3-4
3.3	SPECIAL GRADES AND SPECIAL GRADE REQUIREMENTS.....	3-4
3.4	WORK RECORD.....	3-5
3.5	REPRESENTATIVE PORTION.....	3-5
3.6	WORK SAMPLE.....	3-5
3.7	FILE SAMPLE.....	3-5
3.8	PERCENTAGES.....	3-5
3.9	LABORATORY SCALES.....	3-6
3.10	PRELIMINARY EXAMINATION.....	3-6
3.11	BASIS OF DETERMINATION.....	3-7
3.12	INSECT INFESTATION (WEEVILY).....	3-8
3.13	MOISTURE.....	3-10
3.14	CLASS.....	3-11
3.15	ODOR.....	3-11
3.16	HEATING.....	3-12
3.17	DOCKAGE.....	3-13
3.18	CONTRASTING CLASSES.....	3-14
3.19	CLASSES THAT BLEND.....	3-15
3.20	SOUND BEANS.....	3-16
3.21	DEFECTS.....	3-16
3.22	TOTAL DOCKAGE, DEFECTS, AND FOREIGN MATERIAL.....	3-17
3.23	SPLITS.....	3-18
3.24	DAMAGED BEANS.....	3-18
3.25	BADLY DAMAGED BEANS.....	3-22
3.26	FOREIGN MATERIAL.....	3-22
3.27	BLISTERED, WRINKLED, AND BROKEN BEANS.....	3-23
3.28	NOT WELL SCREENED.....	3-24
3.29	SIZE.....	3-25
3.30	SEED COUNT.....	3-26
3.31	CHECKED SEED COAT.....	3-26
3.32	OFF-COLOR.....	3-27
3.33	MATERIALLY WEATHERED BEANS.....	3-27
3.34	INSECT WEBBING AND FILTH.....	3-28

CHAPTER 3

INSPECTION

3.1	DEFINITIONS	3-1
3.2	GRADES AND GRADE REQUIREMENTS	3-4
3.3	SPECIAL GRADES AND SPECIAL GRADE REQUIREMENTS.....	3-4
3.4	VISUAL REFERENCE AIDS.....	3-4
3.5	WORK RECORD.....	3-5
3.6	REPRESENTATIVE PORTION.....	3-5
3.7	WORK SAMPLE	3-5
3.8	FILE SAMPLE	3-6
3.9	PERCENTAGES	3-6
3.10	LABORATORY SCALES	3-6
3.11	PRELIMINARY EXAMINATION	3-7
3.12	BASIS OF DETERMINATION.....	3-7
3.13	GENERAL ORDER OF PROCEDURES	3-8
3.14	INSECT INFESTATION (WEEVILY)	3-9
3.15	MOISTURE.....	3-10
3.16	CLASS.....	3-11
3.17	ODOR.....	3-12
3.18	HEATING	3-13
3.19	DOCKAGE.....	3-13
3.20	CONTRASTING CLASSES.....	3-15
3.21	CLASSES THAT BLEND	3-16
3.22	SOUND BEANS	3-16
3.23	DEFECTS (Total).....	3-17
3.24	TOTAL DOCKAGE, DEFECTS, AND FOREIGN MATERIAL.....	3-17
3.25	SPLITS	3-18
3.26	DAMAGED BEANS.....	3-19
3.27	BADLY DAMAGED BEANS.....	3-22
3.28	FOREIGN MATERIAL and STONES	3-23
3.29	BLISTERED, WRINKLED, AND BROKEN BEANS	3-23
3.30	WELL SCREENED/NOT WELL SCREENED.....	3-25
3.31	SIZE.....	3-26
3.32	SEED COUNT	3-26
3.33	CHECKED SEED COATS	3-27
3.34	COLOR.....	3-27
3.35	MATERIALLY WEATHERED BEANS	3-28
3.36	INSECT WEBBING OR FILTH.....	3-28

CHAPTER 3

INSPECTION

3.37	ANIMAL FILTH	3-29
3.38	UNKNOWN FOREIGN SUBSTANCE	3-29
3.39	BROKEN GLASS	3-29
3.40	METAL FRAGMENTS	3-30
3.41	DISTINCTLY LOW QUALITY	3-30

Attachment – Grades and Grade Requirements for Beans

3.1 DEFINITIONS

Beans. *Beans shall be dry threshed field and garden beans, whole, broken, and split, commonly used for edible purposes.*

Beans shall be divided into classes as follows, each of which, except Mixed beans, may contain not more than 2.0 percent of beans of contrasting classes and not more than 15.0 percent of beans of other classes that blend:

- a. *PEA BEANS (THE TYPE AS GROWN IN THE GREAT LAKES REGION, KNOWN ALSO AS NAVY BEANS).* Seeds that are small, oval, quite plump, ends abruptly rounded, and white in color, through which shows numerous gray, vein-like markings over the entire surface.
- b. *BLACKEYE BEANS (COWPEAS OF THE BLACKEYE VARIETY).* Cowpeas of the Browneye and Violeteye types shall also be considered as Blackeye beans. Seeds that are medium, slightly flattened, skin wrinkled, and white in color with large black, brown, or violet spots surrounding the eye.
- c. *CRANBERRY BEANS (KNOWN ALSO AS SPECKLED CRANBERRY AND HORTICULTURAL POLE).* Seeds that are medium large, very broad, oval, exceedingly plump, ends uniformly but abruptly rounded, and light buff in color, sparingly splashed and streaked with dark red over entire surface and marked with a moderate wide, deep, orange eye ring.
- d. *YELLOW EYE BEANS.* Seeds that are medium large to large, slightly less than 5/8 of an inch long, proportionately broad, plump, width 1/2 of the length, round at each end, straight at eye, and clear opaque white in color, outside the eye, with a large eye pattern that should cover about 1/4 the area.
- e. *PINTO BEANS (INCLUDING THE MEXICAN PINTO TYPE, BUT NOT THE TYPE KNOWN AS SPOTTED RED MEXICAN).* Seeds that are medium large, somewhat flattened, and light brown in color, tinted salmon with narrow curved streaks of darker brown or mahogany red.
- f. *MARROW BEANS (NOT INCLUDING RED MARROW).* Seeds that are rather large, short, quite plump, ovate, with fully rounded ends, and white in color.

- g. *GREAT NORTHERN BEANS*. Seeds that are intermediate to large, rather lengthened in size and shape, and similar to, but smaller and flatter than white kidney beans, and white in color.
- h. *SMALL WHITE BEANS (THE TYPE AS GROWN ON THE PACIFIC COAST, NOT INCLUDING TEPARY BEANS)*. Seeds that are small, shape somewhat triangular, flattened, one end somewhat larger and broader than the other, both ends rounded but the small end more abruptly, and white in color.
- i. *FLAT SMALL WHITE BEANS (THE TYPE AS GROWN IN NORTHERN IDAHO)*. Seeds that are slightly larger than small white beans, but distinctly flattened in shape.
- j. *WHITE KIDNEY BEANS*. Seeds that are large, oblong to kidney shaped, fairly plump to somewhat flattened, ends rounded, white to slightly creamy in color (especially about the eye), and distinctly veined.
- k. *LIGHT RED KIDNEY BEANS (INCLUDING THE TYPE GROWN ON THE PACIFIC COAST)*. Seeds that are medium to large, long, broad, somewhat kidney shaped, may be rather flattened, ends rounded and light to reddish brown in color.
- l. *DARK RED KIDNEY BEANS*. Seeds that are large, oblong to kidney shaped, somewhat flattened, ends rounded, eye small, flat, and dark red in color.
- m. *SMALL RED BEANS (KNOWN ALSO AS RED MEXICAN, CALIFORNIA RED, AND IDAHO RED)*. Seeds that are small, very broad, oval, reddish purple in color over the entire surface, and marked with a very narrow, black eye ring.
- n. *PINK BEANS*. Seeds that are medium-sized, thin, and light salmon pink in color with rather obscure light brown eye ring.
- o. *BLACK BEANS*. Seeds that are small, oval to rectangular in shape, and black in color with white eye.
- p. *MUNG BEANS*. Seeds that are very small, oblong, blunt ends, olive green to dark green in color, and occasionally marbled with black, yellow, or brown. (Note: Chinese Red beans are "mung type" beans and are similar in shape but slightly larger and red in color.)
- q. *MISCELLANEOUS BEANS. BEANS THAT ARE NOT OTHERWISE CLASSIFIED IN THESE STANDARDS SHALL BE CLASSIFIED AND DESIGNATED ACCORDING TO THE COMMONLY ACCEPTED COMMERCIAL NAME OF SUCH BEANS*. Cowpeas of types other than Blackeye, Browneye, and Violeteye shall be considered as Miscellaneous beans.

- r. *LARGE LIMA BEANS (CHARACTERISTIC OF THE LARGE WHITE POLE AND BURPEE BUSH LIMA TYPE).* Seeds that are large, broad, oblong, fairly plump, ends rounded, and pale creamy white to greenish white in color.
- s. *BABY LIMA BEANS (CHARACTERISTIC OF SMALL WHITE LIMA BEANS OF THE HENDERSON BUSH AND SIMILAR TYPES).* Seeds that are small, short, broad, somewhat triangular, flattened, surface somewhat wrinkled, one end usually broader and more gradually rounded than the other, and pale creamy white in color.
- t. *MISCELLANEOUS LIMA BEANS. LIMA BEANS THAT DO NOT COME WITHIN THE CLASSES LARGE LIMA OR BABY LIMA SHALL BE CLASSIFIED AND DESIGNATED ACCORDING TO THEIR COMMONLY ACCEPTED COMMERCIAL NAME.*
 - (1) Florida Butter Speckled Lima Beans. Seeds that are small and similar in shape to Baby Lima beans, but are light buff blotched and irregularly spotted with reddish brown, deep maroon, or nearly black over one end and a portion of the sides, hilar and dorsal surfaces.
 - (2) Fordhook Lima Beans. Seeds that are similar in size, shape, and color to Large Lima beans except that the seeds are very thick towards one end.
 - (3) Jackson Wonder Lima Beans. Seeds that are similar in size and shape to Baby Lima beans but are reddish brown and covered with dark streaks on all sides.
 - (4) Thorogreen Lima Beans. Seeds that are similar in size and shape to Baby Lima beans, but the seedcoats are mostly light green to slightly green in color. Thorogreen lima beans may not contain more than 20.0 percent white seeded beans, including Thorogreen lima beans that due to bleaching/aging have white seed coats.

NOTE: Thorogreen lima beans containing more than 20.0 percent of white seeds will be graded U.S. Substandard.

- u. *MIXED BEANS. MIXED BEANS SHALL BE ANY MIXTURE OF BEANS NOT PROVIDED FOR IN THE CLASSES LISTED ABOVE.*

3.2 GRADES AND GRADE REQUIREMENTS

- a. The grades and grade requirements for all classes of beans, except Mixed beans, are shown in the United States Standards for Beans (sections 132 - 140) and in the Attachment, "Grades and Grade Requirements for Beans," to this chapter.

NOTE: Field-run beans (i.e., dry beans from which the dockage has not been removed) are usually inspected for factors only, without reference to grade. The factor designation for field-run beans may include the percentage of dockage and type of sieve used in making the determination; the percentage of total defects (including the percentage of splits, damaged beans, contrasting classes, and foreign material); and the percentage of moisture.

- b. Grade Mixed beans according to the grade requirements of the class of beans which predominates in the mixture. Disregard the factors of contrasting classes and classes that blend in Mixed beans.
- c. When beans are graded "U.S. Substandard," record the percent of sound beans to the nearest tenth percent, on the grade line of the certificate.

3.3 SPECIAL GRADES AND SPECIAL GRADE REQUIREMENTS

- a. The special grades and special grade requirements of all classes of beans are shown in the United States Standards for Beans (section 142).
- b. A special grade, when applicable, is supplemental to the grade assigned. Such special grades for beans are defined as follows:
 - (1) High Moisture. Beans that contain over 18.0 percent moisture.
 - (2) Prime Handpicked. Pea beans that are generally better in quality than U.S. No. 1.
 - (3) Choice Handpicked. Pea beans that are better in quality than U.S. No. 1 and Prime Handpicked.

3.4 VISUAL REFERENCE AIDS

- a. General. The visual grading aids (VRA) system assists inspectors in making subjective grading decisions. This system consists of visual reference images (VRI's).

- b. Visual Reference Images. The visual grading aids system represents the foundation for the national inspection system's subjective quality control program, providing an effective management tool for aligning inspectors and assisting them in making proper and consistent subjective grading decisions. The system consists of a series of commodity specific VRI's and descriptive text which, with regular use, controls and diminishes the impact of ordinary perceptual differences.

VRI's for dry beans may be viewed on GIPSA's website at:

<http://www.usda.gov/gipsa/tech-servsup/visualref/beans.htm>

- c. Miscellaneous Aids. Inspectors may use a magnifying glass or similar device for visual identification of small objects.

The Board of Appeals and Review is responsible for the production of VRI's.
Direct all correspondence concerning these items to:

USDA, GIPSA, GIPSA, TSD
Board of Appeals and Review
10383 N. Ambassador Drive
Kansas City, Missouri 64153-1394
Telephone: (816) 891-0401

3.5 WORK RECORD

Record the results of all tests and findings clearly and accurately on a laboratory ticket or similar form. This will be used as the source of the information reported on the inspection certificate. FGIS personnel shall use form FGIS-933, "Bean Sample Ticket."

3.6 REPRESENTATIVE PORTION

A specified quantity of beans divided out from the representative sample by means of an FGIS-approved device.

3.7 WORK SAMPLE

A representative portion of beans (approximate size - 1,000 grams) that is used to make all such determinations required for a particular class of beans.

3.8 FILE SAMPLE

- a. A representative portion of beans (approximate size - 1,000 grams) that may be used in conjunction with the work sample, when needed. File samples may also be used for monitoring, retest, and appeal inspection purposes.
- b. Retain file samples in appropriate containers for the required retention period. After maintaining for the required period, dispose of the file samples in accordance with established procedures. See FGIS Directive 9170.13, "Uniform File Sample Retention System," for additional information.

3.9 PERCENTAGES

All percentages shall be determined upon the basis of weight and shall be stated in terms of whole, tenths, and hundredths of a percent as required for individual factors.

- a. Percentages are determined on the basis of weight and are rounded as follows:
 - (1) When the figure to be rounded is followed by a figure greater than or equal to 5, round to the next higher figure; e.g., report 6.36 as 6.4, 0.35 as 0.4, and 2.45 as 2.5.
 - (2) When the figure to be rounded is followed by a figure less than 5, retain the figure; e.g., report 8.34 as 8.3 and 1.22 as 1.2.
- b. All percentages, except foreign material, stones, and contrasting classes in Choice Handpicked and Prime Handpicked Pea beans, are stated in whole and tenth percent to the nearest tenth percent. Foreign material, stones, and contrasting classes in Choice Handpicked and Prime Handpicked Pea beans are stated to the nearest hundredth percent.

3.10 LABORATORY SCALES

Weigh samples and portions of samples using the proper class of FGIS-approved laboratory scales, and record the results to the correct division size. Use the following table to determine the scale class and division size required for weighing particular sized samples.

Table 1

<u>Laboratory Scales</u>			
Portion Size	Scale Class	Maximum Division Size	Record Results to at Least the Nearest--
120 grams or less	Precision	0.01 gram	0.01 gram
Samples for moisture determinations	Precision or Moisture	0.1 gram	0.1 gram
More than 120 grams	Precision, Moisture, or General	1 gram	1 gram

NOTE: See Chapter 2 of the Equipment Handbook for additional information.

3.11 PRELIMINARY EXAMINATION

- a. The sampler must observe the uniformity of the beans as to class, quality, and condition; make the determination for "Heating;" draw the representative sample and report relevant information to the inspector.
- b. The inspector must review the sampler's remarks/information. If the inspector has questions or doubts the representativeness of the sample, he or she must contact the sampler and obtain the needed information or make arrangements to obtain another sample.

3.12 BASIS OF DETERMINATION

All determinations shall be upon the basis of the beans as a whole.

NOTE 1: When beans are offered for inspection as one lot are found to contain more than 10,000 containers or 1,000,000 pounds (bulk) of beans, the lot must be sampled on the basis of two or more (approximately) equal-sized sublots of 10,000 containers or 1,000,000 pounds or less. Inspect each sublot separately.

NOTE 2: When beans that are offered for inspection as one lot are subsequently found to contain portions that are distinctly different in class, quality, or condition, the beans in each portion shall be inspected separately.

3.13 GENERAL ORDER OF PROCEDURES

Follow a systematic factor examination procedure. The order of procedure may vary depending on the class and quality of the beans and the tests that are requested. A general order of procedure is as follows:

- a. Review the information on the sample ticket.
- b. Examine the representative sample for odor and distinctly low quality.
- c. Use an FGIS-approved divider to process the representative sample into three representative portions: a work sample, a file sample, and a moisture sample.

NOTE: For specific information on the operation and maintenance of dividers, see Chapter 7 of the Equipment Handbook.

- d. (Field-run only) Remove the dockage from the work sample.
- e. Examine the work sample for: animal filth, broken glass, insect webbing and filth, live insects, materially weathered beans, metal fragments, not well screened beans, and unknown foreign substances.
- f. Upon request or when deemed necessary, determine the percent of moisture.
- g. Divide out a 500-gram representative portion from the work sample and examine it for all grade-determining factors, except damaged beans.
- h. Divide out a representative portion and examine for damaged beans.

Large Lima, Baby Lima, Miscellaneous Lima, Dark Red Kidney, Light Red Kidney, Marrow, Mixed, Pea, and White Kidney beans, examine 500 grams.

Cranberry, Great Northern, Pinto, and Small Red beans, examine 375 grams.

Adzuki, Blackeye, Black, Flat Small White, Pink, Small White, and Yelloweye beans, examine 250 grams.

Mung beans, examine 50 grams.

Miscellaneous beans, examine the same amount as is required for a class of beans of similar size and shape.

3.14 INSECT INFESTATION (WEEVILY)

"Weevils" shall include pea weevils, coffee bean weevils, broad nosed grain weevils, rice weevils, granary weevils, maize weevils, and lesser grain borers. "Other live insects" shall include beetles, moths, meal worms, and other insects injurious to stored beans.

- a. Determine weevily on the basis of the work sample, representative sample as a whole, and the lot as a whole.
- b. Examine the work sample for live insects and clean-cut weevil-bored beans.
 - (1) If no live insects are found in the sample, make no further check for insects.
 - (a) If two or more live insects are found, consider the beans to be weevily.
 - (b) If one live insect is found, examine the file sample.
 - 1 If one or more live insects are found in the file sample, consider the beans to be weevily.
 - 2 If no live insects are found in the file sample, do not consider the beans to be weevily.
 - (2) If no clean-cut weevil-bored beans are found in the sample, make no further check for clean-cut weevil-bored beans.
 - (a) In Mung beans, if more than 0.5 percent clean-cut weevil-bored beans are found consider the beans to be weevily.
 - (b) In all other classes of beans:
 - 1 If two or more clean-cut weevil-bored beans are found, consider the beans to be weevily.

2 If one clean-cut weevil-bored bean is found, examine the file sample.

a If one or more clean-cut weevil-bored beans are found in the file sample, consider the beans to be weevily.

b If no clean-cut weevil-bored beans are found in the file sample, do not consider the beans to be weevily.

NOTE: If less than 1,000 grams is available, the presence of one clean-cut weevil-bored bean in a 500-gram representative portion shall be considered sufficient evidence that the beans are weevily.

(3) Examine the beans in the lot; i.e., the surface area of the lot and the area around the lot.

NOTE: The presence of weevils in a warehouse should not be considered an indication of infestation unless weevils are also found inside bags or containers of beans.

(a) If no live insects are found in, on, or about the lot, make no further check of the lot for insects.

(b) If two or more live insects are found, consider the beans to be "U.S. Sample grade."

c. When applicable, show "Weevily" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.15 MOISTURE

Moisture shall be determined by the use of equipment and procedures prescribed by the Federal Grain Inspection Service, U.S. Department of Agriculture.

The special grade designation "High Moisture" is applicable to all classes of beans containing over 18.0 percent moisture.

a. Upon request or when deemed necessary, determine moisture on a representative portion of approximately 300 grams of beans.

b. Refer to the Moisture Handbook for information about determining moisture.

- c. Record the percent of moisture on the work record and the certificate to the nearest tenth percent. If the moisture content exceeds 18.0 percent, grade the beans "High moisture."

NOTE: To determine the moisture content of Miscellaneous beans, use the moisture chart for the class of beans most similar in size and shape to the Miscellaneous beans in question. For Mung beans, use the Pea bean chart.

NOTE: If a representative portion of the original sample of beans was not placed in a moisture-proof container at the time of sampling, promptly do so upon arrival at the laboratory. Seal the container with a friction or screw-top lid to preserve the moisture. The use of open containers, paper containers, and similar containers for holding moisture samples is prohibited.

3.16 CLASS

Beans shall be divided into classes as follows: Pea Beans, Blackeye Beans, Cranberry Beans, Yelloweye Beans, Pinto Beans, Marrow Beans, Great Northern Beans, Small White Beans, Flat Small White Beans, White Kidney Beans, Light Red Kidney Beans, Dark Red Kidney Beans, Small Red Beans, Pink Beans, Black Beans, Mung Beans, Miscellaneous Beans, Large Lima Beans, Baby Lima Beans, Miscellaneous Lima Beans, and Mixed Beans.

- a. Class is usually determined by a cursory examination of the work sample as a whole.
- b. When a detailed examination is necessary, determine class on a representative portion of approximately 500 grams. Use bean characteristics, including the color, size, and shape of the beans, when making this determination.
- c. If the beans contain more than 2.0 percent contrasting classes or more than 15.0 percent classes that blend:
 - (1) Record the percent of each class on the work record to the nearest tenth percent,
 - (2) Grade the beans "Mixed beans," and record the percent of each class of bean, to the nearest tenth percent, in order of predominance, on the grade line of the certificate.

- d. Miscellaneous beans shall be any class of beans not classified in the standards. For Certification, show the commonly accepted commercial name as the class.

3.17 ODOR

- a. Determine odor on the basis of the representative sample as a whole.
 - (1) Off-odors (i.e., musty, sour, and commercially objectionable odor) are usually detected at the time of sampling.
 - (a) If there is any question as to the odor when the sample is being taken, a part of the sample shall be put into an airtight container to preserve its condition for further examination in the laboratory.
 - (b) Such portions shall be returned to the sample before the other tests are made.
 - (2) A musty odor shall be any odor that is earthy, moldy, and ground-like. Do not confuse a burlap bag odor with a musty odor.
 - (3) A sour odor shall be any odor that is rancid, sharp, or acrid.
 - (4) A commercially objectionable odor shall be any odor that is not normal to beans and that, because of its presence, renders the beans unfit for normal commercial usage (e.g., fertilizer, hides, oil products, skunk, smoke, fire-burnt, and decaying animal and vegetable matter odors).
 - (5) Fumigants or insecticide odors are not considered as commercially objectionable odors, unless they are caused by a fumigant or insecticide that does not dissipate quickly. When a sample of beans contains a fumigant or insecticide odor that prohibits a true odor determination, the following guidelines shall apply:
 - (a) The representative sample of beans shall be allowed to air out in an open metal container (e.g., a pan) for up to 4 hours; and
 - (b) If the fumigant or insecticide odor still prohibits the determination of the beans' true odor after 4 hours, the beans shall be considered as having a commercially objectionable odor.
- b. When beans are determined to be musty, sour, or have a commercially objectionable odor, record the type of odor on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.18 HEATING

- a. Determine heating on the basis of the lot as a whole.
 - (1) When high temperatures develop in beans as the result of excessive respiration, such beans are heating.
 - (2) Heating beans usually give off a sour or musty odor.
 - (3) Care should be taken never to confuse beans that are warm due to storage in bins, cars, or other containers during hot weather with beans that are heating from excessive respiration.
- b. When applicable, show the term "Heating" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.19 DOCKAGE

Dockage in field-run beans consist of small, underdeveloped dry beans, pieces of dry beans, and all matter other than dry beans which can be removed readily by the use of an FGIS-approved sieve.

NOTE: This factor is not provided for under the United States Standards for Beans, but may be determined upon request.

- a. Determine dockage on a representative portion of approximately 500 grams of field-run beans (1000 grams for Large Lima and Garbanzo beans).
- b. Remove the dockage from the beans by sieving the representative portion with the appropriate-size sieve. For Mixed dry beans, use the sieve prescribed for the class of beans that predominates the mixture.
- c. Do not remove beans from the pods when determining dockage.

Table 2

<u>Prescribed Sieves</u>	
<u>Classes</u>	<u>Sieves</u>
Small-size Dry Beans	9/64" x 3/4" slotted-hole
Medium-size Dry Beans	10/64" x 3/4" slotted-hole
Large-size Dry Beans	11/64" x 3/4" slotted-hole
Large Garbanzo Beans	18/64" round-hole
Small Garbanzo Beans	16/64" round-hole
Miscellaneous Dry Beans	Use appropriate size sieve

- (1) Using a mechanical sizer.
 - (a) Nest the sieve on top of a bottom pan.
 - (b) Place the sieve in a mechanical grain sizer so that the slotted perforations are parallel to the motion of the sizer and set the timer to 20.
 - (c) Put one-half (one-third for Large Lima and Garbanzo beans) of the representative portion in the center of the sieve and actuate the sizer.
 - (d) Remove the dockage from the remainder of the representative portion in the same manner.
- (2) Hand sieving.
 - (a) Nest the sieve on top of a bottom pan.
 - (b) Hold the sieve so that the slotted perforations are parallel to the sieving motion and ensure the sieve and the bottom pan are level.
 - (c) Put one-half (one-third for Large Lima and Garbanzo beans) of the representative portion in the center of the sieve.
 - (d) Using a steady motion, move the sieves from right to left approximately 10 inches, and return from left to right to complete one sieving operation. Repeat this operation 20 times.
 - (e) Remove the dockage from the remainder of the representative portion in the same manner.

- (3) Return the material remaining in the perforations of the sieve to the portion that remains on top of the sieve.
 - (4) Consider all material that passed through the sieve as dockage. Pick out large material, such as pods and stems, from the beans remaining on top of the sieve and add it to the dockage.
- d. Record the percent of dockage, with the size of sieve(s) used in the determination, on the work record and the certificate to the nearest tenth percent.

3.20 CONTRASTING CLASSES

Beans of other classes that are of a different color, size, or shape from the beans of the class designated.

- a. Determine contrasting classes on a representative portion of approximately 500 grams. Use bean characteristics, including the color, size, and shape of the beans, when making this determination.

Table 3

<u>Example of Contrasting Classes</u>	
<u>Class</u>	<u>Contrasting Classes</u>
Any class of white beans.....	Any class of another color
Small Red or Pink beans.....	Light or Dark Red Kidney beans
Blackeye, Cranberry, or Pinto beans.....	Any other class of beans
Large Lima or Baby Lima beans.....	Any other class of beans
Miscellaneous Lima beans.....	Any other class of beans
Small Red beans.....	Pink beans
Black beans.....	Any other class of beans
Great Northern beans.....	Pea Beans, Small White, Flat Small White beans

- b. Except for Pea beans, record the percent of contrasting classes on the work record and the certificate to the nearest tenth percent. As a rule of thumb:
 - (1) For Pea beans that contain 0.05 percent of contrasting classes or more, record the percent of contrasting classes on the work record and the certificate to the nearest tenth percent.

- (2) For Pea beans that contain less than 0.05 percent of contrasting classes, record the percent of contrasting classes on the work record and the certificate to the nearest hundredth percent.
- c. When beans are determined to have more than 2.0 percent contrasting classes, grade the beans "Mixed beans" and record the percent of each class of bean, to the nearest tenth percent, in order of predominance, on the grade line of the certificate.

3.21 CLASSES THAT BLEND

Sound beans of other classes that are similar in color, size, and shape to the beans of the class designated, and shall include white beans in the class Yelloweye which are similar in size and shape to the Yelloweye beans.

- a. Determine classes that blend on a representative portion of approximately 500 grams. Use bean characteristics, including the color, size, and shape of the beans, when making this determination.

NOTE: Yelloweye beans in grades U.S. Nos. 1 and 2 may contain an additional 5.0 percent of classes that blend; provided that these "additional" beans are white beans of similar size and shape to Yelloweye beans.

Table 4

<u>Example of Classes That Blend</u>	
<u>Class</u>	<u>Classes That Blend</u>
Pea beans.....	Small White beans
Small White beans.....	Flat Small White beans
Dark Red Kidney beans.....	Light Red Kidney beans
Great Northern beans.....	Marrow beans, White Kidney beans

- b. Record the percent of classes that blend on the work record and the certificate to the nearest tenth percent.
- c. When beans are determined to have more than 15.0 percent classes that blend, grade the beans "Mixed beans" and record the percent of each class of bean, to the nearest tenth percent, in order of predominance, on the grade line of the certificate.

3.22 SOUND BEANS

Beans that are free of defects.

- a. Determine sound beans on a representative portion of approximately 500 grams.

- b. Record the percent of sound beans on the work record and the certificate to the nearest tenth percent.
- c. When beans are graded "U.S. Substandard," record the percent of sound beans to the nearest tenth percent, on the grade line of the certificate.

3.23 DEFECTS (TOTAL)

Defects for the classes Baby Lima and Miscellaneous Lima beans shall be damaged beans, contrasting classes, and foreign material. Defects for all other classes of beans shall be splits, damaged beans, contrasting classes, and foreign material.

- a. For the classes Baby Lima and Miscellaneous Lima beans, determine defects by determining the sum of the percent of damaged beans, contrasting classes, and foreign material.
- b. For mixed beans, determine total defects by determining the sum of the percent of splits, damaged beans, and foreign material.
- c. For all other classes of beans, determine total defects by determining the sum of the percent of splits, damaged beans, contrasting classes, and foreign material.
- d. The percent of total defects cannot be shown on the work record or the certificate when only one or two of the factors defined as defects have been determined. However, when one or two factors are determined and their sum would change the numerical grade or come close to changing the grade, the other factor(s) must be determined.
- e. Record the percent of total defects on the work record and the certificate to the nearest tenth percent.

3.24 TOTAL DOCKAGE, DEFECTS, AND FOREIGN MATERIAL

NOTE: This factor is not provided for under the United States Standards for Beans, but may be determined upon request.

- a. Compute the percent of total dockage, total defects, and foreign material as follows:
 - (1) Determine the weight of the work sample.

- (2) Determine the weight of the dockage in the work sample (e.g., 50 grams).
 - (3) Calculate the percent of dockage (e.g., $50 \text{ grams} \div 500 \text{ grams} = 10 \text{ percent}$).
 - (4) Calculate the percent of dockage-free beans (e.g., $100 \text{ percent} - 10 \text{ percent} = 90 \text{ percent}$).
 - (5) Determine the weight of the defective beans and foreign material portion (e.g., 500 grams).
 - (6) Determine the weight of the defective beans and foreign material (e.g., 12.5 grams).
 - (7) Calculate the percentage of defective beans and foreign material (e.g., $12.5 \text{ grams} \div 500 \text{ grams} = 2.5 \text{ percent}$).
 - (8) Adjust the percentage of defective beans and foreign material by the base (e.g., $2.5 \text{ percent} \times 90 \text{ percent} = 2.25 \text{ percent}$).
 - (9) Calculate the percentage of total dockage, defects, and foreign material (e.g., $10 \text{ percent} + 2.25 \text{ percent} = 12.25 \text{ percent}$).
- b. Record the percent of "total dockage, defects, and foreign material" on the work record and the certificate to the nearest tenth percent.

3.25 SPLITS

Pieces of beans, including detached seedcoats, that are not damaged, each of which consists of three-fourths or less of the whole bean, and shall include any sound bean the halves of which are held together loosely.

- a. Determine splits on a representative portion of approximately 500 grams.
 - (1) To determine whether there is a separation of the halves within the seed coat, beans that appear to be held together loosely by the seed coat shall be rolled very gently between the first finger and thumb, with the minimum amount of pressure being applied.
 - (2) If the halves move readily and are loose, the bean shall be considered as split.
- b. Record the percent of splits on the work record and the certificate to the nearest tenth percent.

3.26 DAMAGED BEANS

Beans and pieces of beans that are damaged by frost, weather, disease, weevils or other insects, or other causes.

- a. Determine damaged beans on a representative portion of approximately:

500 grams for: Large Lima, Baby Lima, Miscellaneous Lima, Dark Red Kidney, Light Red Kidney, Marrow, Mixed, Pea, and White Kidney beans;

375 grams for: Cranberry, Great Northern, Pinto, and Small Red beans;

250 grams for: Adzuki, Blackeye, Black, Flat Small White, Pink, Small White, and Yelloweye beans;

50 grams for: Mung beans; and

the same amount as is used for a class of beans of similar size and shape for: Miscellaneous beans

NOTE: To interpret the various types and degrees of damaged beans correctly, use the appropriate visual reference image (VRI). See Section 3.41 "Visual Reference Aids."

- b. The major types of damaged beans are as follows:

- (1) Clean-Cut Weevil-Bored Beans. Clean-cut weevil-bored beans shall be beans from which weevils have emerged, leaving a clean-cut open cavity free from larvae, webbing, refuse, filth, mold, or stain. [Refer to VRI - BEAN - 2.0](#)

NOTE: Mung beans in grades U.S. Nos. 1, 2, and 3 may contain not more than 0.1, 0.2, and 0.5 percent, respectively, of clean-cut weevil-bored beans.

- (2) Dirt and Grime Damaged Beans. Beans (other than Pea beans) and split beans with dirt or grime adhering to the seed coat equal to or greater than that shown on VRI BEAN – 3.1. The dirt or grime may be confined to one side or a combination of both sides. Smaller dirt spots (but not grimy areas) may be combined to equal to the amount shown on [VRI - BEAN - 3.1.](#) (For dirt and grime damaged "pieces of beans," refer to [VRI - BEAN – 13.0.](#))

NOTE: The percent of Pea beans with a significant amount of dirt or grime adhering to their seed coat may be determined upon request. The results of this determination shall be shown in the "Remarks" section of the official bean certificate. These results shall not, however, be used to determine the grade of the Pea beans. (Refer to [VRI – Bean 3.0](#), "Dirt and Grime Affected Pea Beans (Not Damage).")

- (3) Frost Damaged Beans. Beans and pieces of beans which have been damaged by frost to the extent that the cotyledon has been discolored. Frost damage is indicated by the appearance of the whole bean; but the actual determination for damage shall be made on the basis of the opened bean, the discoloration shall be equal to or greater than that shown on [VRI - BEAN – 4.0.](#)
- (4) Insect Stung Beans. Beans and pieces of beans which are distinctly damaged by weevils or other insects.
- (a) Blackeye Beans. Beans and pieces of Blackeye beans that have any of the following: Two or more stings that extend into the cotyledon; a single severe sting extending into the cotyledon with discoloration equal to or greater than the amount shown on [VRI - BEAN – 6.0;](#) or a chalky-spot equal to or greater than that shown on [VRI - BEAN – 6.0;](#) (Carefully remove seed coat to determine size of spot when applicable.)
- (b) Beans Other than Blackeye Beans (including cowpeas). Beans and pieces of beans that have any of the following: One severe sting (not required to extend into the cotyledon) with discoloration equal to or greater than the amount shown on [VRI - BEAN – 6.1;](#) or two or more stings extending into the cotyledon. (Carefully remove seed coat to determine size of spot when applicable.)

NOTE: Chalky spots only apply to Blackeye beans.

NOTE: No further examination (removal of the seed coat) is required when there is only a single sting. However, occasionally it may be necessary to remove the seed coat from beans that have several small stings to determine if penetration of the cotyledon has occurred.

- (5) Machine Damaged Beans. Beans and pieces of beans that are either cut or scraped due to handling, and which contain dirt or grime on the cotyledon equal to or greater than that shown on [VRI - BEAN – 15.0](#).
- (6) Mold Damaged Beans. Beans and pieces of beans which contain mold equal to or greater than that shown on [VRI - BEAN – 9.0 and 9.1](#). Mold may appear on or around the hilum, the surface, or the cotyledon.

NOTE: Closely examine any bean that evidences signs of internal mold damage. But, do not scrape or split any bean that appears (externally) to be sound. The presence of mold in some splits should not be considered to be sufficient justification for opening all beans in the sample.

- (7) Nightshade Damaged Beans. Beans and pieces of beans containing nightshade juice causing dirt and other matter to adhere to the seed coat equal to or greater than that shown on [VRI - BEAN -10.0](#). Beans affected by bag markings/ink stains shall also be considered to be damaged if the discoloration is equal to or greater than that shown on [VRI - BEAN -10.0](#) or [12.0](#).
- (8) Sprout Damaged Beans. Beans and pieces of beans which are sprouted in which the sprout is equal to or greater than that shown on [VRI - BEAN – 11.0](#). Also, beans in which the sprout has obviously broken off leaving a socket.
- (9) Visible Window Damaged Beans. Beans and pieces of beans which are weevil-bored, but the weevil has not emerged from the bean. A "window" of seed coat covers the bore hole. The bean may contain a live or dead weevil. Refer to [VRI - BEAN-2.1](#).

NOTE: Beans that contain two or more "visible window damaged beans," are considered to be contaminated by insect webbing or filth, and shall be graded "U.S. Sample grade."

- (10) Water Blistered Damaged Beans. Beans and pieces of beans which are damaged by water and have discoloration of the seed coat equal to or greater than that shown on [VRI - BEAN – 12.0 or 12.2](#). ("Tiger-striped" beans shall not be considered as damaged – see [VRI - BEAN – 12.1](#)). For Blackeye beans, use the Pea bean VRI as a guide in determining discoloration and use the Pinto bean VRI as a guide to determining area of coverage.
- (11) Hail Damaged Beans. Beans and pieces of beans which are damaged by hail. Hail damaged beans are similar in color to water blistered beans. Therefore, for Pink beans use [VRI - BEAN – 12.2](#), and for all other classes of beans use [VRI - BEAN – 12.0](#), when determining hail damage. [VRI - BEAN – 8.0](#)
- (12) Worm-Eaten Beans or Worm-Cut Beans. Beans and pieces of beans which have been chewed by insect larvae, not to be confused with clean-cut weevil-bored beans or weevil-bored beans containing insect webbing or filth. Any chewed bean is considered damaged. Refer to [VRI - BEAN – 8.0](#)
- (13) Immature, Green, Garbanzo Beans. Immature, green garbanzo beans (chickpeas) are undesirable because they tend to produce off flavors and, when canned, turn a grayish color creating a moldy appearance. For this reason, beans with any discernible amount of green are damaged. Refer to [VRI - BEAN – 5.0](#).

NOTE 1: Small underdeveloped or shriveled beans, broken beans, or beans with cracked seed coats shall not be considered as damaged beans unless otherwise damaged.

NOTE 2: Blistered, wrinkled, or broken beans in the classes Large Lima, Baby Lima, and Miscellaneous Lima beans shall not be considered as damaged beans unless otherwise damaged. Specific limits for these factors are provided in the grade requirements for each particular class.

- c. Record the percent of damaged beans on the work record and the certificate to the nearest tenth percent.

3.27 BADLY DAMAGED BEANS

Beans and pieces of beans that are materially damaged or discolored by frost, weather, disease, weevils or other insects, or other causes so as to materially affect the appearance and quality of the beans.

NOTE: This factor is applicable only to classes Large Lima, Baby Lima, Miscellaneous Lima, and Pea beans.

- a. Determine badly damaged beans on a representative portion of approximately 500 grams.
- b. Badly damaged beans are beans and pieces of beans that are materially damaged or discolored to the extent that it affects the appearance and the quality of the bean. Damage must be visible from any position or angle. Refer to [VRI - BEAN – 1.0](#).
- c. Record the percent of badly damaged beans on the work record and the certificate to the nearest tenth percent.

3.28 FOREIGN MATERIAL AND STONES

Foreign material shall be stones, dirt, weed seed, cereal grains, lentils, peas, and all matter other than bean.

Stones shall be concreted earthy or mineral matter, and other substances of similar hardness that do not disintegrate readily in water.

NOTE: Foreign material total is foreign material and stones combined.

NOTE: Beans which contain significant quantities of foreign material that can be removed readily by ordinary cleaning processes are considered as "not well screened" and shall be graded "U.S. Substandard" for this reason.

- a. Determine foreign material and stones on a representative portion of approximately 500 grams.
- b. Except for Pea beans, record the percent of foreign material (total) and stones on the work record and the certificate to the nearest tenth percent. As a rule of thumb:
 - (1) For Pea beans that contain 0.05 percent or more of foreign material (total) or stones, record the percent of foreign material (total) and stones on the work record and the certificate to the nearest tenth percent.
 - (2) For Pea beans that contain less than 0.05 percent of foreign material (total) or stones, record the percent of foreign material (total) and stones on the work record and the certificate to the nearest hundredth percent.

3.29 BLISTERED, WRINKLED, AND BROKEN BEANS

Blistered beans shall be sound beans with badly blistered or burst seed coats.

Wrinkled beans shall be sound beans that have deeply wrinkled seed coats and/or are badly warped or misshapen.

Broken beans shall be sound beans with some but less than one-fourth of each bean broken off or with one-fourth or more of the seed coat removed.

NOTE: This factor is applicable to the classes Large Lima, Baby Lima, and Miscellaneous Lima beans only.

- a. Determine blistered, wrinkled, and broken beans on a representative portion of approximately 500 grams.
 - (1) Sound beans that have a cracked or split seed coat that extends over the eye of the bean and part way down the sides and exposes the cotyledon one-half the way down both sides and over the eye, or is accompanied by other extensive breaks in the seed coat, shall be considered as blistered beans.
 - (2) Sound beans that have deep wrinkles in the seed coat which extends at least halfway into the cotyledon shall be considered as wrinkled beans.
 - (3) Sound beans that are warped or misshapen to the extent that they materially affect the appearance of a lot shall be considered as wrinkled beans.
- b. For Baby Lima and Miscellaneous Lima beans, record the percent of blistered, wrinkled, and broken beans on the work record and the certificate to the nearest tenth percent.
- c. For Large Lima beans:
 - (1) Record the percent of broken beans on the work record and the certificate to the nearest tenth percent.
 - (2) Record the percent of blistered and wrinkled beans on the work record to the nearest tenth percent.
 - (3) Add the percent of blistered and wrinkled beans to the percent of defects, and record the total on the work record and the certificate to the nearest tenth percent.

3.30 WELL SCREENED/NOT WELL SCREENED

Well screened, as applied to the general appearance of beans, shall mean that the beans are uniform in size and are practically free from such small, shriveled, undeveloped beans, splits, broken beans, large beans, and foreign material that can be removed readily by the ordinary process of milling or screening through the proper use of sieves.

- a. Determine well screened on the basis of the work sample as a whole.
 - (1) The term "well screened," as applied to the general appearance of beans, generally describes the practical limits of uniformity in size.
 - (2) Absolute uniformity in size is neither necessary nor practicable.
 - (3) Any beans which meet the requirements for grades U.S. Choice Handpicked, U.S. Prime Handpicked, U.S. Nos. 1, 2, or 3 on account of foreign material and stones may generally be considered as being well screened. However, when the foreign material is of a character that could have been readily screened out (e.g., particularly fine inert material such as sand and pulverized mud lumps), the beans may be considered as not well screened when the sample contains more than 0.20 percent.
- b. Determine not well screened on the basis of the work sample as a whole.
 - (1) The presence of shriveled, undersized, immature or underdeveloped beans gives an uneven appearance and indicates that the beans have not been submitted to the ordinary cleaning and screening operation.
 - (2) Mixtures of more than 5.0 percent of very small, shrunken, or undersized reclaimed beans of any class, with other normal-sized beans of the class, shall cause the mixture to be considered as "not well screened" when such mixtures obviously are of such character that the quality is not properly reflected in the numerical grade.
- c. When applicable, show the term "Not well screened" on the work record and in the "Remarks" section of the certificate, and grade the beans no higher than "U.S. Substandard."

3.31 SIZE

A 28/64 sieve shall be a metal sieve 0.0619-inch thick perforated with round holes 0.4675 (28/64) inch in diameter which are 19/62 inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

A 24/64 sieve shall be a metal sieve 0.0619-inch thick perforated with round holes 0.6750 (24/64) inch in diameter which are 17/62 inch from center to center. The perforations of each row shall be staggered in relation to the adjacent row.

NOTE: This factor is applicable to the class Large Lima beans only.

- a. Determine size on a representative portion of approximately 500 grams.
 - (1) Nest a 28/64 sieve and a 24/64 sieve in a bottom pan (28/64 sieve on top).
 - (2) If an FGIS-approved mechanical sizer is used:
 - (a) Place the sieves in the sizer holder and set the timer to 20.
 - (b) Put the beans in the center of the top sieve and actuate the sizer.
 - (3) If the beans are to be sieved by hand:
 - (a) Put the beans in the center of the top sieve and hold the sieves and bottom pan level in both hands directly in front of the body with the elbows close to the side.
 - (b) In a steady sieving motion, move the sieve from right to left approximately 10 inches and return from left to right to complete the operation.
 - (c) Repeat the complete operation 20 times.
- b. Record the percent of beans that passed through the 28/64 sieve and the percent of beans that passed through the 24/64 sieve on the work record and the certificate to the nearest tenth percent.

3.32 SEED COUNT

NOTE: This factor is not provided for under the United States Standards for Beans, but may be determined upon request.

- a. Determine seed count (i.e., the number of beans per ounce) on a representative portion of exactly 141.9 grams of beans after the removal of defects and foreign material.
- b. Count the beans in the portion, divide the results by 5, and then round the number to the nearest whole number.
- c. Show the statement "(rounded whole number) beans per ounce." on the work and the certificate.

3.33 CHECKED SEED COATS

NOTE: This factor is not provided for under the United States Standards for Beans, but may be determined upon request.

- a. Determine checked seed coat (i.e., partially detached) on a representative portion of approximately 125 grams of beans after the removal of defects and foreign material.
- b. Place the beans in a shallow container and completely cover them with hot tap water.
- c. Allow the beans to soak for 5 minutes and then pour off the water. Let the beans air-dry for one minute on a paper towel. Weigh the "drained bean" portion.
- d. Pick out the beans with checked seed coats, weigh the separation, and then divide it by the weight of the "drained bean" portion.
- e. Record the percent of checked seed coats on the work record and the certificate to the nearest tenth percent.

3.34 COLOR

NOTE: This factor is not provided for under the United States Standards for Beans, but may be determined upon request.

Applicants may request, as part of a grade or a "factor-only" inspection service request, an assessment of bean color. This analysis is provided for information only and does not have any significance to the assignment of numerical grade.

- a. Determine color and uniformity of color, on a representative portion of approximately 500 grams of the sample as a whole.
- b. When requested, applicants must furnish a "type sample" for comparison purposes. Inspection personnel are to use this submitted type sample in accordance with Chapter 1, section 1.9, "Registered Type Sample Inspections," in the evaluation of the market sample's overall color quality, as well as color uniformity.
- c. Compare the color quality of the market sample to the type sample and in the "Remarks" section of the certificate state whether the overall color is "equal to or better than" or "not equal to" the registered type sample.

3.35 MATERIALLY WEATHERED BEANS

- a. Determine materially weathered on the basis of the work sample as a whole.
 - (1) Weathering is caused by exposure of the beans to adverse weather conditions, such as prolonged rains or snow.
 - (2) Materially weathered beans are badly discolored, often with severely cracked or rough seed coats.
- b. When applicable, show the term "Materially weathered" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.36 INSECT WEBBING OR FILTH

- a. Determine insect webbing and filth on the basis of the representative sample as a whole.
 - (1) The presence of two or more beans containing insect webbing or filth (refuse, excreta, or dead insects or larvae, including house flies) in a work sample shall be considered sufficient evidence of insect webbing or filth.
 - (2) One bean containing insect webbing or filth in the work sample and any bean containing insect webbing or filth in the file sample shall be considered sufficient evidence of insect webbing or filth.
 - (3) The presence of two or more dead insects in a 500-gram representative portion shall be considered sufficient evidence of insect webbing or filth.
- b. When applicable, show the term "Insect webbing or filth" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

NOTE: If less than 1,000 grams is available, the presence of one bean containing insect webbing or filth in a 500-gram representative portion shall be considered sufficient evidence of insect webbing or filth.

3.37 ANIMAL FILTH

- a. Determine animal filth on the basis of the representative sample as a whole.
 - (1) The presence of two or more rodent or bird pellets in a work sample shall be considered sufficient evidence of animal filth.
 - (2) One pellet in the work sample and any pellets in the file sample shall be considered sufficient evidence of animal filth.
- b. When applicable, show the term "Animal filth" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.38 UNKNOWN FOREIGN SUBSTANCE

- a. Determine unknown foreign substance on the basis of the representative sample as a whole.
 - (1) The presence of two or more particles of an unknown foreign substance, including rock salt or other crystalline substances, or a commonly recognized harmful or toxic substance, including so-called "pink beans" (beans treated with mercury or panagin), in a work sample shall be sufficient evidence of unknown foreign substance.
 - (2) One particle of an unknown foreign substance or one treated bean in a work sample and any other particle or treated bean in the file sample shall be sufficient evidence of unknown foreign substance.
- b. When applicable, show the term "Unknown foreign substance" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.39 BROKEN GLASS

- a. Determine broken glass on the basis of the representative sample as a whole or the lot as a whole.

- b. The presence of any broken glass, regardless of the size or amount, in a representative sample or in the lot shall be sufficient evidence of broken glass.
- c. When applicable, show the term "Broken glass" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.40 METAL FRAGMENTS

- a. Determine metal fragments on the basis of the representative sample as a whole or the lot as a whole.
 - (1) The presence of two or more metal fragments, such as filings or shavings, in a work sample or in the lot shall be sufficient evidence of metal fragments.
 - (2) One metal fragment in a work sample and any metal fragment in the file sample shall be sufficient evidence of metal fragments.
- b. When applicable, show the term "Metal fragments" on the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

3.41 DISTINCTLY LOW QUALITY

- a. Determine distinctly low quality on the basis of the representative sample as a whole or the lot as a whole.
- b. Beans that are obviously affected by unusual conditions which adversely affect the quality of the beans and which cannot be graded properly by use of the grading factors specified or defined in the standards shall be considered as being of distinctly low quality.
- c. When applicable, show the statement "Distinctly low quality on account of (cause or reason).\" On the work record and in the Remarks section of the certificate, and grade the beans "U.S. Sample grade."

PAGE RESERVED

GRADES AND GRADE REQUIREMENTS FOR BEANS:

TABLE 1	Pea Beans
TABLE 2	Blackeye Beans
TABLE 3	Yelloweye Beans
TABLE 4	Cranberry Beans
TABLE 5	Pinto Beans
TABLE 6	Marrow, Great Northern, Small White, Flat Small White, White Kidney, Light Red Kidney, Dark Red Kidney, Small Red, Pink, Black, and Miscellaneous Beans
TABLE 7	Mung Beans
TABLE 8	Large Lima Beans
TABLE 9	Baby Lima and Miscellaneous Lima Beans

TABLE NO. 1 – PEA BEANS

Grade	Maximum Limits of -						
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Badly damaged (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)
U.S. Choice Handpicked	18.0	1.5	0.3	0.01	0.01	0.01	2.0
U.S. Prime Handpicked	18.0	3.0	0.3	0.01	0.01	0.01	2.0
U.S. No. 1	18.0	2.0	2.0	0.4	0.2	0.5	4.0
U.S. No. 2	18.0	3.0	3.0	0.8	0.4	1.0	4.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. Choice Handpicked through U.S. 2 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 2 – BLACK EYE BEANS

Grade	Maximum Limits of -						
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)
U.S. No.1	18.0	4.0	2.0	0.5	0.2	0.5	5.0
U.S. No. 2	18.0	6.0	4.0	1.0	0.4	1.0	10.0
U.S. No. 3	18.0	8.0	6.0	1.5	0.6	2.0	15.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 3 – YELLOWEYE BEANS

Grade	Maximum Limits of -							In addition to classes that blend, white beans similar in size and shape in the class Yelloweye Beans (percent)
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)	
U.S. No 1	18.0	4.0	2.0	0.5	0.2	0.5	5.0	5.0
U.S. No. 2	18.0	6.0	4.0	1.0	0.4	1.0	10.0	5.0
U.S. No. 3	18.0	8.0	6.0	1.5	0.6	2.0	15.0	---

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 4 – CRANBERRY BEANS

Grade	Maximum Limits of -						
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)
U.S. No. 1	18.0	4.0	2.0	0.5	0.2	0.5	5.0
U.S. No. 2	18.0	6.0	4.0	1.0	0.4	1.0	10.0
U.S. No. 3	18.0	8.0	6.0	1.5	0.6	2.0	15.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 5 – PINTO BEANS

Grade	Maximum Limits of -						
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)
U.S. No. 1	18.0	3.0	3.0	0.5	0.2	0.5	5.0
U.S. No. 2	18.0	5.0	5.0	1.0	0.4	1.0	10.0
U.S. No. 3	18.0	7.0	7.0	1.5	0.6	2.0	15.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans

TABLE NO. 6 – MARROW, GREAT NORTHERN, SMALL WHITE, FLAT SMALL WHITE, WHITE KIDNEY, LIGHT RED KIDNEY, DARK RED KIDNEY, SMALL RED, PINK, BLACK, AND MISCELLANEOUS BEANS

Grade	Maximum Limits of -						
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Foreign Material (percent)		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)
U.S. No. 1	18.0	2.0	2.0	0.5	0.2	0.5	5.0
U.S. No. 2	18.0	4.0	4.0	1.0	0.4	1.0	10.0
U.S. No. 3	18.0	6.0	6.0	1.5	0.6	2.0	15.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 7 – MUNG BEANS

Grade	Maximum Limits of -							
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, & SPL (percent)	Total damaged (percent)	Clean cut weevil bored ^{2/} (percent)	Foreign Material (percent) Total Stones		Contrasting classes ^{3/} (percent)	Classes that blend ^{4/} (percent)
U.S. No. 1	18.0	2.0	2.0	0.1	0.5	0.2	0.5	5.0
U.S. No. 2	18.0	4.0	4.0	0.2	1.0	0.4	1.0	10.0
U.S. No. 3	18.0	6.0	6.0	0.5	1.5	0.6	2.0	15.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. No. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 0.5 percent clean cut weevil bored beans are graded U.S. Sample Grade.

^{3/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{4/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE NO. 8 – LARGE LIMA BEANS

Grade	Maximum Limits of -					
	Moisture ^{1/} (percent)	Total blistered, wrinkled, and defects (percent)	Damaged Beans (percent) Badly Total damaged		Foreign Material (percent) Total Stones	
U.S. No. 1	18.0	6.0	2.0	0.5	0.5	0.2
U.S. No. 2	18.0	9.0	3.0	1.0	1.0	0.3

Grade	Maximum Limits of -					
	Contrasting classes ^{2/} (percent)	Splits (percent)	Broken (percent)	Classes that blend ^{3/} (percent)	Beans Through (percent) 28/64" 24/64"	
U.S. No. 1	0.5	3.0	5.0	5.0	25.0	5.0
U.S. No. 2	1.0	5.0	5.0	10.0	40.0	5.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 or U.S. 2 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans.

TABLE 9 - BABY LIMA AND MISCELLANEOUS LIMA BEANS

Grade	Maximum Limits of -								
	Moisture ^{1/} (percent)	Total defects (DK, FM, CCL, (percent)	Badly damaged (percent)	Foreign Material (percent)		Contrasting classes ^{2/} (percent)	Classes that blend ^{3/} (percent)	Splits (percent)	Blistered, wrinkled, and/or broken (percent)
U.S. No. 1	18.0	2.0	1.0	0.5	0.2	0.5	5.0	2.0	2.0
U.S. No. 2	18.0	4.0	1.5	1.0	0.3	1.0	10.0	4.0	4.0
U.S. No. 3	18.0	6.0	2.0	1.5	0.6	2.0	15.0	6.0	6.0

U.S. Substandard: U.S. Substandard shall be beans which do not meet the requirements for the grades U.S. No. 1 through U.S. 3 or U.S. Sample grade. Beans which are not well screened shall also be U.S. Substandard, except for beans which meet the requirements for U.S. Sample grade.

U.S. Sample grade U.S. Sample grade shall be beans which are musty, sour, heating, materially weathered, or weevily; which have any commercially objectionable odor; which contain insect webbing or filth, animal filth, any unknown foreign substance, broken glass, or metal fragments; or which are otherwise of distinctly low quality.

^{1/} Beans with more than 18.0 percent moisture are graded High moisture.

^{2/} Beans with more than 2.0 percent contrasting classes are graded Mixed beans.

^{3/} Beans with more than 15.0 percent classes that blend are graded Mixed beans

CHAPTER 4

CERTIFICATION

4.1	GENERAL.....	4-1
4.2	LOT INSPECTION CERTIFICATE.....	4-1
4.3	SUBMITTED SAMPLE INSPECTION CERTIFICATE.....	4-2
4.4	DIVIDED-LOT CERTIFICATE.....	4-2
4.5	PARTIAL INSPECTION CERTIFICATE.....	4-4
4.6	CORRECTED CERTIFICATE.....	4-6
4.7	DUPLICATE CERTIFICATE.....	4-8
4.8	MULTIPLE GRADE CERTIFICATE.....	4-9
4.9	INSPECTION DATE INFORMATION.....	4-9
4.10	REMARKS INFORMATION.....	4-10
4.11	SHIPPER AND CONSIGNEE INFORMATION.....	4-10
4.12	CARRIER OR CONTAINER INFORMATION.....	4-11
4.13	CONTAINER MARKINGS INFORMATION.....	4-13
4.14	LOCATION INFORMATION.....	4-15
4.15	QUANTITY INFORMATION.....	4-16
4.16	FACTOR INFORMATION.....	4-17
4.17	GRADE DESIGNATIONS.....	4-17
4.18	APPROVED STATEMENTS.....	4-18
4.19	AUTHORIZATION TO AFFIX NAMES.....	4-20
4.20	VOIDED CERTIFICATE.....	4-21
4.21	CERTIFICATE DISTRIBUTION.....	4-21

Attachment 1 - Form FGIS-993, "Commodity Inspection Certificate"
(Lot Inspection Certificate)

Attachment 2 - Form FGIS-994, "Commodity Certificate Submitted Sample
Inspection"

4.1 GENERAL

- a. Official certificates issued and not superseded under the Act and the regulations are receivable by all offices and all courts of the United States as prima facie evidence of the truth of the statements stated thereon.
- b. A certificate shall be issued for each lot or submitted sample inspection of beans whether for kind, class, grade, factor analysis, equal-to-type, or other quality designations as defined in the standards or instructions, or for any other approved services performed.
- c. The information shown on the certificate shall be taken from the work record and the application for service.
- d. Cooperators may use FGIS forms and certificates or their own forms and certificates. All forms and certificates must be approved by FGIS prior to use.

4.2 LOT INSPECTION CERTIFICATE

- a. A lot inspection certificate shall be issued to show quality and other service results for an identified lot of beans based on a sample drawn by official personnel. An inspection for quality may include kind, class, grade, factor analysis, equal-to-type, or any other quality designation as defined in the standards or instructions. Other services that may be shown on the certificate are: checkweighing, checkloading, checkcounting, condition of food containers, plant approval, and observation of loading.
- b. An unqualified lot inspection certificate shall not be issued as representing an identified lot unless the entire lot is accessible for sampling and a representative sample can be obtained.
- c. If only part of a lot is accessible for sampling, a lot inspection certificate may be issued based on a representative sample obtained from the accessible portion, provided that the certificate is qualified by printing or stamping the words "PARTIAL INSPECTION" thereon (see section 4.5).

4.3 SUBMITTED SAMPLE INSPECTION CERTIFICATE

- a. A submitted sample inspection certificate shall be issued to show the results of an inspection for quality of beans based on a sample submitted by an applicant. An inspection for quality may include kind, class, grade, factor analysis, equal-to-type, or any other quality designation as defined in the standards or instructions.
- b. Each submitted sample inspection certificate shall clearly state that the results of the inspection apply only to the sample described by the certificate and not to the lot from which the sample may have been taken.
- c. A submitted sample may be identified by the applicant by sample number, producer's name, letters of the alphabet, or any other identification, including a lot or carrier identifier. If a submitted sample is not adequately identified, the inspector may assign a number to the sample or request the applicant to assign a number or other identifier to the sample.

NOTE: In the case of field-run dry beans, any identification may be used which, in the opinion of the inspector, will not lend itself to fraudulent or other misuse.

4.4 DIVIDED-LOT CERTIFICATE

- a. Divided-lot certificates are multiple certificates issued for specified quantities which comprise a lot for which an original lot inspection certificate has been issued, surrendered, and voided.
- b. When beans are offered for inspection and are certificated as a single lot, the applicant may exchange the lot certificate for two or more divided-lot certificates.
- c. Requests for divided-lot certificates shall be made, in writing, to the office that issued the outstanding certificate, by the applicant who made the initial request.
- d. Divided-lot certificates must be issued within five business days of the outstanding certificate date and before the lot's identity has been lost. FGIS field office managers may, on a case by case basis, waive these requirements when necessary to facilitate trade.
- e. Requests for divided-lot certificates must show:
 - (1) The bean quantity to be shown on each divided-lot certificate.

- (2) Name and address of each consignee, if any.
 - (3) Load order number, purchase authorization number, reference number, contract number, letter of credit identification, or similar identification required for each individual consignee.
- f. Prior to issuing a divided-lot certificate, the original inspection certificate must be in the custody of the cooperator or FGIS field office and be marked “VOID-SURRENDERED FOR DIVIDED-LOT CERTIFICATES.”
- g. If official personnel determine that the condition of the affected beans have changed since the original inspection, the request for divided-lot certificates shall be dismissed.
- h. Show the same information, inspection date, and statements on each divided-lot certificate, including approved statements, that were shown on the superseded certificate. Additionally, show on each divided-lot certificate the following:
 - (1) On the original and all copies, show the completed statement “These (beans) are part of an undivided lot of (number of pounds or sacks, as warranted).”
 - (2) On the original, show the term “Divided-Lot Original,” and on the copies, show the term “Divided-Lot Copy.”
 - (3) The same serial number as shown on the superseded certificate with a consecutively numbered suffix (for example, 1764-1, 1764-2, 1764-3, etc.). Inspection certificates have preprinted serial numbers. The preprinted number must be “X’d” out and replaced with the superseded certificate number and the serially numbered suffix.
 - (4) The bean quantity requested on the application. No divided-lot certificate shall be issued which shows, individually or collectively, a bean quantity in excess of the quantity shown on the superseded original certificate.

- (5) At the request of the applicant, a separate consignee, load order number, purchase authorization number, reference number, contract number, letter of credit identification, or similar identification may be shown on each divided-lot certificate. This information must be furnished by the applicant, in writing, and identical information must be shown on the superseded certificate or on a letterhead document attached to the superseded certificate.
- (6) The markings on packaged bean containers will be shown according to procedures in section 4.13 of this chapter. The markings shown on the superseded certificate must be shown on each divided-lot certificate with the number of containers for each marking.
- i. If checkweighing is performed as part of the original inspection, the estimated average gross, tare, and net weights determined during the original service shall be used to determine the estimated total gross, tare, and net weights to be shown on the divided-lot certificate.
- j. After divided-lot certificates have been issued, further dividing or combining is prohibited except with the approval of the GIPSA Administrator. These limitations do not apply when a corrected certificate must be issued.

4.5 PARTIAL INSPECTION CERTIFICATE

- a. There may be circumstances when the entire lot is not accessible or a representative sample cannot be obtained. In such instances, official personnel will issue the inspection certificate stating the estimated quantity of the beans in the accessible portion and that the inspection is limited to the accessible portion. Conspicuously show in the heading of the inspection certificate the words “PARTIAL INSPECTION.”
- b. For bulk beans in bins and shipholds that are sampled by a 12-foot bulk trier that does not reach the bottom of the lot, a partial inspection certificate shall be issued. Show the following statement “Top ___ feet sampled. Bottom not sampled.” in the Remarks section of the certificate.

NOTE: **Do not issue a partial inspection certificate for bulk beans in hopper cars or barges that are sampled by a 12-foot bulk trier that does not reach the bottom of the lot. But, show the following statement “Top ___ feet sampled. Bottom not sampled.” in the Remarks section of the certificate.**

- c. If bulk or sacked beans, which are offered for inspection at rest in a container, are loaded in such a manner that it is possible to secure only a door-probe, shallow-probe, door-sack-probe, or surface-sack-probe sample(s); or if the lot of beans are not trimmed or otherwise does not have a reasonably level surface, the carrier or container will be considered to be “heavily loaded” and a partial inspection certificate issued.
- (1) If a partial inspection is made, the beans shall be sampled as thoroughly as possible with an approved trier. The inspection certificate issued shall have the words “PARTIAL INSPECTION” conspicuously shown in the heading of the certificate.
 - (2) In addition, the certificate shall show the type of sample(s) obtained. The type of sample(s) shall be described as “door-probe,” “shallow- probe,” “door-sack-probe,” or “surface-sack-probe” samples; and, in the case of packaged beans (including sacked beans), the approximate number of containers accessible for sampling and the approximate number of containers in the lot shall be shown in the space provided for quantity on the certificate; e.g., “800/100-pound polypropylene sacks, part of an undivided lot of 1,250 sacks.”
 - (3) For the purpose of this handbook, the following terms shall have the following meanings:
 - (a) Door-probe sample. A sample taken with an approved trier from a bulk bean lot which is loaded so close to the top of the carrier or container that it is possible to insert the trier only in the beans in the vicinity of the door or hatch of the carrier or area in the container in which the beans are located.
 - (b) Shallow-probe sample. A sample taken with an approved trier from a bulk bean lot which is loaded so close to the top of the carrier or container that it is possible to insert the trier in the beans at the prescribed locations but only at an angle greater than the angle prescribed in the handbook.

- (c) Door-sack-probe sample. A sample taken with an approved trier from a sacked bean lot which is loaded so close to the top of the carrier that it is possible to insert the trier only in the bean sacks in the vicinity of the door or hatch of the carrier or area in the container in which the sacks are located.
- (d) Surface-sack-probe sample. A sample taken with an approved trier from a sacked bean lot which is so loaded or placed that it is possible to insert the trier only in the beans in the sacks in the upper portion, sides, or ends of the lot.

4.6 CORRECTED CERTIFICATE

- a. The accuracy of the statements and information shown on official certificates must be verified by the individual whose name or signature, or both, is shown on the official certificate or by the authorized agent who affixed the name or signature, or both. Errors found during this process will be corrected according to this section. The term “errors” includes errors of commission or omission and are not limited to errors of commission or omission attributed to official personnel. Such errors may be attributed to the applicant for inspection.
- b. Only official personnel or their authorized agents may make corrections, erasures, additions, or other changes to official certificates.
- c. No corrections, erasures, additions, or other changes may be made which involve identification, quality, or quantity.
- d. If errors are found prior to issuance, the errors may be corrected by either:
 - (1) Issuing a new certificate (the incorrect certificate shall be marked “VOID”); or
 - (2) Making corrections subject to the following requirements:
 - (a) The corrections shall be neat and legible.
 - (b) The corrections shall be initialed by the individual who corrects the certificate.
 - (c) The corrections and initials are shown on the original and all copies.

- e. If errors are found on an official certificate at any time up to a maximum of one year after issuance, the errors shall be corrected by obtaining the incorrect certificate and replacing it with a corrected certificate. When the incorrect certificate cannot be obtained, a corrected certificate may be issued superseding the incorrect one.
 - (1) Written or verbal notice of error shall be issued to the applicant and respondents.
 - (2) The original of the incorrect certificate shall, if possible, be obtained and clearly marked "VOID."
 - (3) The original and the copies of the corrected certificate shall be issued to the same applicant and respondents who received the certificate found incorrect.
 - (4) The corrected certificate shall show the identical information and statements as shown on the incorrect certificate except:
 - (a) The correct statement or information shall be shown instead of the incorrect or omitted statement or information.
 - (b) The corrected original certificate shall show the term "Corrected Original" and the corrected copies shall show the term "Corrected Copy."
 - (c) The original and the copies shall show, in the space provided for remarks, the following completed statement: "This certificate is corrected as to (reason for correction) and supersedes Certificate No. (superseded certificate number), dated (date of superseded certificate)."
 - (d) If the incorrect certificate cannot be obtained, the statement "The superseded certificate has not been surrendered." shall be clearly shown in the space provided for remarks. Official personnel shall exercise other such precautions as may be necessary to prevent the fraudulent and unauthorized use of the superseded certificate.

- (e) A new serial number shall be shown.
- (5) No corrected certificate shall be issued for a certificate which has been superseded or altered in any manner other than as prescribed in this section without approval of the appropriate FGIS field office manager.
- (6) The provisions of this section shall be applicable to all types and levels of inspections.

4.7 DUPLICATE CERTIFICATE

- a. Upon request, a duplicate certificate may be issued for a lost or destroyed official certificate.
- b. Requests for duplicate certificates shall be filed:
 - (1) In writing and in English;
 - (2) By the applicant who requested the service covered by the lost or destroyed certificate;
 - (3) With the office that issued the initial certificate; and
 - (4) With a statement by the applicant that the original certificate has been lost or destroyed; if lost, that diligent effort has been made to find it without success.
- c. The same information and statements, including approved statements, that were shown on the lost or destroyed certificate shall be shown on the duplicate certificate. Duplicate certificates shall show:
 - (1) The term “Duplicate Original” and the copies shall show “Duplicate Copy.”
 - (2) The original and the copies shall show, in the space provided for remarks, the following completed statement: “This duplicate certificate is issued in lieu of a (lost or destroyed, as applicable) certificate.”
 - (3) The serial number shall be “X’ed” out and the lost or destroyed certificate serial number typed on the certificate.
- d. Duplicate certificates shall be issued as promptly as possible.

- e. Duplicate certificates shall not be issued for certificates that have been superseded or issued in any manner other than prescribed in this section unless otherwise approved by the appropriate FGIS field office manager.
- f. The provisions of this section shall be applicable to all levels of certificates.

4.8 MULTIPLE GRADE CERTIFICATE

- a. When beans are offered for inspection as one lot and are subsequently found to contain portions that are distinctly different in class, quality, or condition, the beans in each portion shall be sampled, inspected, and graded separately, but the results shall be recorded on one certificate.
- b. The certificate shall include the approximate quantity or weight of each portion, the location of each portion in the carrier, and the grade and factor information on the beans in each portion.
 - (1) Enter an estimate of the quantity of the larger portion and the grade of that portion on the certificate first, followed by an estimate of the remainder of the lot and the grade assigned to that portion. For hopper cars, include the identification of the compartment(s).
 - (2) Factor information shall be entered in the proper sequence and must be related to a particular portion and its position in the carrier.

4.9 INSPECTION DATE INFORMATION

- a. The inspection date (or date of issuance or date of service) is the day on which an inspection is completed as shown in the detailed work records. In the case of lot inspections where the analysis, for good reason, is not performed or not completed until the day following the sampling, the certificate may be dated either the day the lot was sampled or the following day when the inspection was completed.
- b. A uniform lot which requires more than one day to sample may be certificated as one lot, provided no undue delay occurs in completion of the lot.

- (1) There must be a reasonably continuous operation taking into consideration weather and other conditions which might interfere in the completion of the lot.
 - (2) If reasonably continuous inspection service is not maintained, one lot inspection certificate shall be issued for the portion inspected prior to the break in inspection service; and one lot inspection certificate shall be issued for the portion inspected after the break in inspection service (or after each additional break in inspection service).
 - (3) “Reasonably continuous inspection service” may include inactive periods of not more than 88 consecutive hours.
- c. Divided-lot certificates shall be dated the same date as shown on the original certificate.

4.10 REMARKS INFORMATION

- a. The space provided for remarks is for showing information which will facilitate marketing. No statement may be shown which is known to be false or misleading. Remarks may include information, such as warehouse receipt numbers, loan numbers, load order numbers, container markings, seal numbers, and approved statements.
- b. The reverse of certificates may be used for showing pertinent information and approved statements. If used, show the statement “(see reverse)” or “(continued on reverse)” conspicuously on the front of the certificate. On the reverse of the certificate, show “Continuation of (applicable space continued from).”

NOTE: **Requests for special statements which are substantially different from approved statements, or which are not approved, shall be referred to the appropriate FGIS field office manager for approval.**

4.11 SHIPPER AND CONSIGNEE INFORMATION

Certificate forms do not have a preprinted space for showing the name and address of a shipper or consignee. This information may be shown in the space provided for remarks. Showing this information is not mandatory, it shall only be shown when requested.

NOTE: **When divided-lot inspection certificates are requested with different consignees for each divided-lot certificate, all consignees must be shown on the surrendered original certificate.**

4.12 CARRIER OR CONTAINER INFORMATION

- a. Carrier, container, and seal identification shall only be shown on lot inspection certificates when the inspection is performed:
 - (1) During the movement of the beans to or from a carrier or container and official personnel observed such movement and performed a stowage examination of the carrier or container prior to movement; or
 - (2) While the beans are at rest in a carrier or container.
- b. Care should be taken to ensure that the proper identification information is recorded.
- c. Official personnel shall obtain identification information personally. Do not transcribe the information from the application or other documents supplied by the applicant or others. Obtain identifying information as follows:
 - (1) Oceangoing vessel identification shall be taken from the vessel hull or obtained from the vessel master or representative.
 - (2) Barge identification shall be taken from the hull, not from removable tops.
 - (3) Railcar identification shall be taken from the side of the car, not from the ends.

NOTE: In certain instances, it may be necessary to separately certificate the beans in one or more compartments of a hopper car because of different class, quality, or condition. In such instances, the first bay or compartment at the car's brake end shall be identified as "B-1," and the remaining compartments or bays being numbered consecutively towards the car's nonbrake end. A statement identifying the compartment shall be shown after the car initials and number, and shall be followed by the seal identification applied to the compartment.

- (4) Truck (without trailer(s)) identification may be taken from a state license plate or other truck identification. In the case of a truck which cannot be sealed, the truck identification need not be shown. If a truck cannot be sealed and if requested by the applicant, the truck may be identified by other identification, such as load number, scale ticket number, or other information which will facilitate the identification of individual trucks.
- (5) Truck trailer identification may be taken from a state license plate on the trailer or other trailer identification. In the case of a trailer which cannot be sealed, the trailer identification need not be shown. If a trailer cannot be sealed and if requested by the applicant, the trailer may be identified by other identification, such as load number, scale ticket number, or other information which will facilitate the identification of individual trailers.
- (6) Container (ocean containers, containerized unit loads, or piggy-back loads) identification shall be taken from the front of the container. The identification number consists of four letters followed by five or six numbers. The last letter or number after the number which is separated by a dash, blank space, or surrounded by a box may be disregarded. For example, if SEAU12345-9 is printed on the container, the identification would be SEAU12345 unless the applicant requested that the "-9" be shown.
- (7) Storage bin identification may be taken from information shown on the bin or from other reliable sources.
- (8) Warehouse lot identification shall be taken from the schematic layout of the warehouse or from other reliable sources; e.g., warehouse receipt number.

4.13 CONTAINER MARKINGS INFORMATION

Most packaged beans have identifying marks on the containers. These marks are required to be shown on the inspection certificate if the marks indicate a different quality of beans than what is actually in the container. All other times, the marking may be shown upon request of the applicant. Show such markings on certificates as follows:

a. Uniform Markings.

- (1) When container markings are uniform for an identified bean lot, then all markings may be shown on the certificate.
- (2) However, much of the markings shown on the containers is information which identifies the container manufacturer or some container specification and does not serve any useful purpose in regard to identifying marks. Such information, unless requested by the applicant, need not be shown as identifying marks on the certificate.
- (3) Markings are usually shown in lines one above the other substantially as follows:

U.S. NO. 1 PINTO BEANS
PRODUCT OF U.S.A.
KC, INC.
CRITCHFIELD, KS

- (4) Space permitting, such markings may be shown on the certificate as shown above but are usually shown with the word “over” in lower case letters between lines, or with slash marks indicating the end of each line of markings, as follows:

U.S. NO. 1 PINTO BEANS over PRODUCT OF U.S.A. over KC, INC. over
CRITCHFIELD, KS

or

U.S. NO. 1 PINTO BEANS/PRODUCT OF U.S.A./KC, INC./CRITCHFIELD, KS

b. Nonuniform Markings.

- (1) On some occasions, an identified bean lot will have varied markings shown on the containers. Such markings are usually the result of the use of “leftover” containers accumulated and used by a shipper at the end of a shipping season.
- (2) When such marks are found and the applicant does not request that such marks be shown, the statement “No Common Marks” may be shown in the space provided for remarks on the certificate.
- (3) If the applicant requests that such varied markings be shown, the applicant has the responsibility of separating the containers by the various markings so that the number of containers of each marking can be determined or the applicant can furnish the count.
- (4) If the applicant furnished the count, the statement “Vendor’s Count” will be shown by the quantity.

c. Nonuniform Markings - With Uniform Sublot Markings.

- (1) There are occasions when several sublots, with uniform markings within each sublot but varying markings from each other, will be accumulated in warehouses and designated as one overall lot.
- (2) In such instances, a record will be kept of the number of sacks of each set of uniform markings contained within the overall lot; and such information may be shown in the space provided for remarks on the certificate.

EXAMPLE: An identified warehouse lot consisting of ten separate cars (1,200 100-pound sacks each) was unloaded on a warehouse floor. Six of the carlots have one set of uniform markings and four of the carlots have another set of uniform markings. The certificate (in regard to markings) would be issued substantially as follows:

7,200 sacks marked: PINTO BEANS/Product of U.S.A./Wrenn Co./Grand Forks, ND/(Reverse) LARENCO MARQUES

4,800 sacks marked: PINTO BEANS/Product of U.S.A./Wrenn Inc./Grand Forks, ND/(Reverse) LARENCO MARQUES

- d. Tag Markings. When containers are tagged with identifying markings, the tag information may be shown in the space provided for remarks on the certificate substantially as follows:

Tag Markings: EXPORT/PINTO BEANS/SOUTH AFRICA

- e. Contract Specification Markings. An applicant may request that the markings be checked only for compliance with contract specifications. In such cases, show in the Remarks section one of the following statements:

“Bag markings as specified by (contract number, agency, or other pertinent information).”

or

“Bag markings not as specified by (contract number, agency, or other pertinent information) because (reason; e.g., code number omitted or letter size incorrect).”

- f. Registered Trademark Markings.

- (1) Many bean companies, exporters, and shippers have registered trademarks (brand names) for commodities packaged by or for them. Such markings may contain art work, such as an eagle, crossed rifles, a plantation home, and many other markings which frequently are not necessary, practicable, or requested by the applicant.
- (2) When such instances occur and all of the brand name information is not needed or requested by the applicant, the brand name may only be shown in parenthesis followed, if necessary, by any export marks shown on the reverse of the sack substantially as follows:

(Eagle Brand) (Reverse) XYC/PINTO BEANS/SOUTH AFRICA

4.14 LOCATION INFORMATION

- a. The space identified as “LOCATION” is provided to show the city and state where an inspection is performed. The place of inspection (e.g., warehouse) may also be shown.

- b. Applicants for inspection may request that the place of inspection not be shown. This request is frequently made by bean exporters or their representatives who may enter into purchase contracts with several bean facilities to fulfill a sales contract commitment for a larger export cargo shipment. In such instances, the place of inspection is not needed by the applicant, would not facilitate efficient and orderly marketing of the beans, and is not required to be shown. However, the place, city, and state where the inspection was performed must be shown on all inspection work records.

4.15 QUANTITY INFORMATION

- a. On lot inspection certificates, the space identified as “QUANTITY” is provided to show the quantity of beans in the lot that is inspected.
 - (1) The lot quantity may be stated in terms of carlot, trucklot, trailerlot, or in pounds, or by container type and capacity and whether the beans are in bulk or packaged.

NOTE: The statement of quantity serves as a part of the lot identity and is not to be construed as a certificate of weight or quantity. In stating the quantity, the words “VENDOR COUNT” (or “VENDOR WEIGHT,” in the case of a bulk lot) shall follow the size of the lot, except when the applicant requests that a lot of sacked beans be checkloaded, checkweighed, or checkcounted and the certificate so states.

- (2) Typical statements of quantity are as follows:

1,000 100-pound new, double polypropylene sacks
1,000 50-kilogram new jute sacks
1,000 110.23-pound sacks (50 kilograms) or (50 kilos)
55,000 100-pound sacks
1 carlot (bulk)
1,000,000 pounds (bulk)
1,100 60-pound cases of 6/10-pound cellophane bags
875 48-pound paper balers (24/2-pound poly. bags)
1,000 30-pound cases of 30/1-pound polyethylene bags

- b. On submitted sample inspection certificates, the space provided for quantity must be used to show the approximate sample quantity in terms of weight or volume. No submitted sample inspection certificate shall be issued which shows, directly or indirectly, the quantity of beans in the lot from which the sample may have been taken.

4.16 FACTOR INFORMATION

- a. Each official certificate shall show the class, grade (when applicable), and any other quality designation according to the United States Standards for Beans, all factor information requested by the applicant, and all grade determining factors for beans graded below the highest quality grade (e.g., U.S. No. 1).

NOTE: **A factor shall be considered to be a quantified physical or chemical property identified in official standards, specifications, information abstracts, contracts, or other documents whose measurement describes a specific quality of a commodity.**

- b. Factor information shall be shown on the certificate as follows:
 - (1) Show factor information on lot inspection certificates by typing the full factor title (no abbreviations) followed by the applicable designation (the percentage, the count, or other quality descriptions).
 - (2) Show factor information on submitted sample inspection certificates by typing either the full factor title or the factor abbreviation (or code), followed by the applicable designation (the percentage, the count, or other quality descriptions). The meaning of each abbreviation used shall be preprinted on the reverse of the submitted sample inspection certificate.

4.17 GRADE DESIGNATIONS

Show the grade designation for all classes of beans in the following order:

- (1) The letters “U.S.”;
- (2) The name (“Substandard” or “Sample grade”) or the number (“1”, “2”, or “3”) of the grade, or the name of any applicable special grade designation (“Choice handpicked” or “Prime handpicked”);

- (a) When a lot is designated “U.S. Substandard,” show the percentage of sound beans on the gradeline and the percentage of splits, damaged beans, contrasting classes, and foreign material in the appropriate factor blocks.
- (b) The special grade designations “Choice handpicked” and “Prime handpicked” shall be applicable only to the class Pea beans.
- (3) The words “or better” when applicable and requested by the applicant prior to inspection;
 - (a) Applicants for inspection may obtain Option 1 or Option 2 certification by requesting it on the application for inspection. The request must be filed prior to the beginning of the inspection.

NOTE: **If no request for either option is submitted prior to the beginning of inspection, certification shall be Option 1.**

- (b) Under Option 1, beans offered for inspection are certificated as a specific grade (e.g., “U.S. No. 2 Pinto Beans.”)
- (c) Under Option 2, beans offered for inspection would be certificated as being a specific grade “or better;” (e.g., “U.S. No. 3 or better Pinto Beans.”)
- (4) The class, and in the case of Mixed beans, the name and percentage of each class in the mixture. (In the classes Miscellaneous Lima beans and Miscellaneous beans, show the commonly accepted commercial name as the class name. Also, upon request, Pea beans may be classed as “Navy beans” and Garbanzo beans as “Chickpeas”); and
- (5) The special grade designation “High moisture,” with the percentage of moisture, or the special grade designation “Off-color,” when applicable.

4.18 APPROVED STATEMENTS

The following statements may be shown on official inspection certificates when deemed appropriate. The wording of these statements may be modified provided the meaning is not altered and the statements are approved by the appropriate FGIS field office or federal-state office manager. These statements, when used, shall be shown in the Remarks section of the certificate unless otherwise stated.

NOTE: **Any information requested by the applicant for inspection which is known to be false or misleading shall not be shown.**

- (1) “The official sample of beans was apparently free of insect infestation at the time of grading.”
- (2) “Container markings apparently meet contract specifications.”
- (3) “Quality except for (factor(s)) would grade (grade and kind).”
- (4) “Amount through ____ sieve, ____ percent.”
- (5) “_____ percent of sound beans.”
- (6) “This (sample or lot) contains ____ percent Tiger Stripe beans. Tiger Stripe beans are not considered as damaged beans.”
- (7) “This (sample or lot) contains ____ percent Pea beans with a significant amount of dirt or grime adhering to the seed coat. Pea beans affected by dirt and grime in this manner are not considered as damaged beans.”
- (8) “Container examination meets all requirements of U.S. Standards for Condition of Food Containers.”
- (9) “Foreign material consists of (type of material).” (Use general terms for the type of material; e.g., dirt and weed seeds.)
- (10) “Damaged beans ____ percent; consisting of ____ percent of (type of damage).”

NOTE: **Use common descriptive terms to identify types of damage; (e.g., “Damaged beans 5 percent; consisting of 2 percent insect-damaged beans, 1 percent frost-damaged beans, and 2 percent other damaged beans.”)**

- (11) “A representative of the USDA witnessed the fumigation of the above-identified lot on (date).”

- (12) “The applicant states the kind and amount of fumigant was (quantity of fumigant used) of (type of fumigant).”
- (13) “The lot (was or was not) inspected to determine the fumigation results.”
- (14) “The official sample drawn to determine effectiveness of fumigation apparently (was or was not) free of insect infestation.”
- (15) “The official sample drawn to determine effectiveness of fumigation indicated insect infestation.”
- (16) “Variety stated by applicant to be ____.”
- (17) “Dockage breakdown results were estimated using hand sieves.”
- (18) “These beans would have graded U.S. No. (grade) except for (e.g., total defects, foreign material, or total damage).”

4.19 AUTHORIZATION TO AFFIX NAMES

- a. Official personnel’s name or signature, or both, may be affixed to official certificates which are prepared from work records signed or initialed by the person whose name will be shown. The agent affixing the name or signature, or both, must:
 - (1) Be employed by a cooperator or FGIS;
 - (2) Have been designated to affix names or signatures, or both; and
 - (3) Hold a power of attorney from the person whose name or signature, or both, will be affixed. The power of attorney shall be on file with the employing cooperator or FGIS, as appropriate.
- b. When a name or signature, or both, is affixed by an authorized agent, the word “By” and the initials of the agent shall appear directly below or following the name or signature of the person.

EXAMPLE: “Walter Jacobs by nc.”

4.20 VOIDED CERTIFICATE

Each official certificate which is rendered useless through clerical error or by being superseded by another certificate shall be conspicuously marked "VOID." If a certificate is rendered useless through clerical error, the original of the certificate shall be retained by the office. If a certificate is superseded, the original of the superseded certificate shall be filed, if surrendered, with the copy of the superseding certificate.

4.21 CERTIFICATE DISTRIBUTION

- a. The original and one copy of each certificate shall be distributed to the applicant or the applicant's order. In addition, one copy of each certificate shall be filed with the office providing the inspection; and, if the inspection is performed by a cooperator, one copy shall be forwarded to the appropriate field office. If requested by the applicant prior to issuance of the certificate, additional copies, not to exceed a total of three copies, shall be furnished at no extra charge.
- b. In addition to the aforementioned distribution requirements, one copy of each appeal certificate shall be distributed to each interested person of record or the interested person's agent and to the cooperator or FGIS field office that issued the superseded certificate.
- c. When more copies of a certificate are requested than can be furnished from one numbered set, copies may be made by using a copying machine or using the copies of another set by voiding the original and writing across it the reason for voiding. (For example: "Extra copies requested by applicant for Certificate No. L-2222." An additional fee for extra copies shall be charged according to the applicable fee schedule.)

PAGE RESERVED

COMMODITY INSPECTION CERTIFICATE FGIS-993



U.S. DEPARTMENT OF AGRICULTURE
FEDERAL GRAIN INSPECTION SERVICE

ORIGINAL
NOT NEGOTIABLE

A-

COMMODITY INSPECTION CERTIFICATE (1)

DATE OF SERVICE (2)	ISSUED AT (3)	LEVEL OF INSPECTION (4)
APPLICANT (5)		LOCATION OF COMMODITY (6)
IDENTIFICATION (7)		QUANTITY AND CONTAINER (8)

(9)

I CERTIFY THAT THE SERVICES SPECIFIED ABOVE
WERE PERFORMED WITH THE RESULTS STATED.

INSPECTOR
(10)

This certificate is issued under the authority of the Agricultural Marketing Act of 1946, as amended (7 U.S.C. 1621 *et seq.*) and the regulations thereunder (7 CFR 868.1 *et seq.*) and is receivable in all courts of the United States as prima facie evidence of the truth of the statements therein contained. This certificate does not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or other Federal laws.

WARNING Sec. 203(h) of the Agricultural Marketing Act of 1946 provides that anyone who shall knowingly falsely make, issue, alter, forge, or counterfeit any official certificate, or aid, assist, or be a party to such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than 1 year, or both.

The conduct of all services and the licensing of inspection/grading/sampling personnel under the regulations governing such services shall be accomplished without discrimination as to race, color, religion, sex, national origin, age, or handicap.

FORM FGIS-993

INSTRUCTIONS FOR COMPLETING FORM FGIS-993,
“COMMODITY INSPECTION CERTIFICATE”
(LOT INSPECTION CERTIFICATE)

- (1) Enter the words, “BEAN LOT INSPECTION.”
- (2) Enter the inspection date.
- (3) Enter the name of the city and state of the field office or cooperator’s office issuing the certificate; e.g., Sacramento, California.
- (4) Enter the type of inspection performed; i.e., original, retest, appeal, or Board appeal.
- (5) Enter the applicant’s name, city, and state.
- (6) Enter the location (place name, city, and state) of the beans. If this information is the same as that shown in block 5, the term “Same” may be entered.
- (7) Enter the lot’s identification.
- (8) Enter the quantity of beans in the lot.
- (9) When applicable, enter the grade designation.

Enter the inspection results and the results of all factor determinations.

When necessary, enter the term “REMARKS” followed by any required or approved statements.

Enter the words “END OF RESULTS” on the left-hand side of the certificate directly under the last line of remarks.

- (10) Enter the name or signature, or both, of the person who issued the certificate and, if affixed by an authorized agent, the word “By” and the agent’s initials.

**COMMODITY CERTIFICATE
SUBMITTED SAMPLE INSPECTION FGIS-994**



U.S. DEPARTMENT OF AGRICULTURE
FEDERAL GRAIN INSPECTION SERVICE

ORIGINAL
NOT NEGOTIABLE

**COMMODITY CERTIFICATE
SUBMITTED SAMPLE INSPECTION**

A-

DATE OF SERVICE (1)	ISSUED AT (2)	LEVEL OF INSPECTION (3)
COMMODITY (4)	QUANTITY OF SAMPLE (5)	
IDENTIFICATION OF SAMPLE (6)	SAMPLE SUBMITTED BY (7)	

(8)

NOT OFFICIALLY SAMPLED

*I CERTIFY THAT THE SERVICES SPECIFIED ABOVE
WERE PERFORMED WITH THE RESULTS STATED.*

INSPECTOR
(9)

This certificate is issued under the authority of the Agricultural Marketing Act of 1946, as amended (7 U.S.C. 1621 *et seq.*) and the regulations thereunder (7 CFR 868.1 *et seq.*) and is receivable in all courts of the United States as prima facie evidence of the truth of the statements therein contained. This certificate does not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or other Federal laws.

WARNING Sec. 203(h) of the Agricultural Marketing Act of 1946 provides that anyone who shall knowingly falsely make, issue, alter, forge, or counterfeit any official certificate, or aid, assist, or be a party to such actions, is subject to a fine of not more than \$1,000 or imprisonment for not more than 1 year, or both.

The conduct of all services and the licensing of inspection/grading/sampling personnel under the regulations governing such services shall be accomplished without discrimination as to race, color, religion, sex, national origin, age, or handicap.

FORM FGIS-994

INSTRUCTIONS FOR COMPLETING FORM FGIS-994,
“COMMODITY CERTIFICATE”
(SUBMITTED SAMPLE INSPECTION CERTIFICATE)

- (1) Enter the inspection date.
- (2) Enter the name of the city and state of the field office or cooperator’s office issuing the certificate; e.g., Sacramento, California.
- (3) Enter the type of inspection performed; i.e., original, retest, appeal, or Board appeal.
- (4) Enter the class of the beans.
- (5) Enter the approximate quantity of sample submitted; e.g., 1 pound or 1,000 grams.
- (6) Enter the submitted sample’s identification.
- (7) Enter the applicant’s name, city, and state.
- (8) When applicable, enter the grade designation.

Enter the inspection results and the results of all factor determinations.

When necessary, enter the term “REMARKS” followed by any required or approved statements.

Enter the words “END OF RESULTS” on the left-hand side of the certificate directly under the last line of remarks.

- (9) Enter the name or signature, or both, of the person who issued the certificate and, if affixed by an authorized agent, the word “By” and the agent’s initials.

PAGE RESERVED

BEAN INSPECTION HANDBOOK

EEO STATEMENT

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means of communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

For additional copies, contact:

APHIS, MSD-HSB, PDMS
Room 1A28
4700 River Road
Riverdale, Maryland 20737

Telephone: (301) 734-5523